2013 Community Health Assessment

for Southeast Baltimore County

Dedicated to Mary Harvey

1958-2012

Baltimore County Office of Community Conservation, 1994 - 2010

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Introduction

MedStar Franklin Square Medical Center collaborates with the Southeast Network, a coalition of private and public entities working to study and improve the well-being of the southeastern portion of Baltimore County (which will be referred to as "the southeast area" in this report). "The Network" has been working for over a decade to identify problems and support solutions for health-related disparities in the southeast area. As such, the Network started work on a community health needs assessment in 2005, which identified 27 indicators of health and well-being across ten categories and, with research and technical assistance from InterGroup Services, completed a baseline study in 2008. MedStar Franklin Square started work with InterGroup Services again in 2012 to complete a follow-up report, once again examining the baseline indicators and analyzing changes and trends over a ten-year period.

Indicator Findings

The findings of the 2013 report are summarized below for each of the ten indicator categories. For all indicators, the southeast area is compared against Baltimore County and Maryland as a whole. Within the southeast area, its component ZIP codes are compared against each other The ZIP codes correspond approximately to the following neighborhoods:

Perry Hall: 21128	Dundalk: 21222
Raspeburg: 21206	Highlandtown/O'Donnell Heights: 21224
Sparrows Point: 21219	Overlea/Nottingham: 21236
Middle River: 21220	Rosedale: 21237
Essex: 21221	

Infants

Four indicators were used in this report to gauge infant health in the southeast area: infant mortality, low birth weight, births to Hispanic mothers and births to teenage mothers. The southeast area had higher rates than Baltimore County for all of these indicators, though its rates of infant mortality, low birth weight and births to teen mothers were all on the decline. For the infant mortality indicator, the southeast area rate was unstable between 2000 and 2009, with a spread of 3.72 deaths per 1,000 live births during those years. The southeast area, unlike the other observed areas of Baltimore County and Maryland, had a decrease in low birth weight percentage from 2000 to 2009. Births to Hispanic mothers have trended upward in all three observed areas since 2000. Of the three areas compared, Maryland actually had the highest Hispanic birth rate as a percentage of all births in 2009, followed by the southeast area. The southeast area Hispanic birth rate more than doubled in 10 years. This is in line with the growth of the area's Hispanic population. The teenage birth rate in the southeast area (10.8 percent in 2009) declined significantly from the previous report.

Safety

For infants and children, safety is an important aspect of growth, both mentally and physically. This report examines child abuse and neglect as a measure of safety for infants and children. Baltimore County and the southeast area both had increased rates of child abuse and neglect from state fiscal year (SFY) 2005 to SFY 2012. The southeast area had the highest rate of child abuse and neglect of the observed areas in SFY 2012, with a rate of 124.9 cases per 100,000 population.

Early Education

To measure early education, this report relied on the indicators of child-care availability and Work Sampling System scores, the latter of which determines kindergarten readiness. Data were reviewed on the availability of two types of licensed child care in Baltimore County, the southeast area and Maryland: family child-care centers (which can care for a maximum of eight children) and 8-12 hour centers (which often care for more than 50 children and function on a school-like structure). Of the three areas, the southeast area had the lowest total child-care capacity in 2011, but the highest family-center capacity. The southeast area had the least availability of child-care slots in 8-12 hour centers in 2011 (172.50 slots per 1,000 children under five), well shy of the Baltimore County rate (265.93 slots per 1,000). For the most part, southeast area schools exhibited an upward trend in kindergarten readiness from school year (SY) 2006 to SY 2011. Maryland schools are aiming for 92 percent of kindergarteners to be "fully ready" to enter school by 2015. Few schools have met that standard so far.

Later Education

Maryland School Assessment (MSA) scores, chronic school absenteeism, high school leaver rates and graduating seniors with plans to attend four-year colleges are herein used to determine the state of later education in the southeast area. The MSA gives students scores of basic, proficient, or advanced. At the elementary level, MSA proficiency scores primarily trended upward between SY 2006 and SY 2011. The proportion of MSA scores of proficient or above for middle schools were up in all three areas from SY 2006 to SY 2011. Even so, middle school students in the southeast area performed worse than those in the county as a whole, with a difference of roughly six percentage points in the proficiency of the two areas in SY 2011. Chronic absenteeism (more than 20 absences in a school year) can hamper the achievement of students at all levels of education. In the southeast area, elementary schools exhibited mixed results in chronic absenteeism between SY 2006 and SY 2011. Middle school chronic absenteeism declined in all three areas from SY 2006 to SY 2011, but the SY 2011 southeast area rate (13.28 per cent of middle school students) was still almost three percentage points higher than the county rate. Unlike the elementary and middle school levels, chronic absenteeism at the high school level predominantly increased from SY 2006 to SY 2011, with more than one in five Baltimore County high school students chronically absent and many southeast area schools topping that rate.

The high school leaver rate is a method used to determine the percentage of students in a particular class that graduate in four years' time. In the southeast area in SY 2011, the leaver rate continued to be a struggle for a number of southeast area schools, though Eastern Technical maintained a leaver rate of greater than 95 percent. Southeast area leaver rates spanned from 71.07 percent at Dundalk to greater than 95 percent at Eastern Technical. From SY 2006 to SY 2011, the percentage of seniors with four-year college plans increased in Baltimore County, the southeast area and Maryland. While more than 50 percent of seniors had four-year college plans in Baltimore County and the state, the southeast area rate was only 32.12 percent in SY 2011.

Juvenile Crime

Juvenile arrests for violent crime, property (or non-violent) crime and drug-related offenses were used in this research as indicators of delinquency for youth in the southeast area. Crime rates among juveniles tend to follow similar patterns as adult crimes. From 2005 to 2011, juvenile violent crime rates fell in all three observed areas. The southeast area had the highest violent crime arrest rate among juveniles in 2011, which accounted for 26 more juvenile arrests per 100,000 population than in Baltimore County as a whole. Among juvenile violent crimes, most arrests were for aggravated assault. In 2011, the southeast area also had the highest rate of non-violent crime arrests among juveniles, but this rate was less than half of the area's 2005 rate for the same types of crimes. Thefts resulted in the largest number of juvenile arrests for non-violent crimes. Drug-related juvenile arrests declined across all observed areas from 2005 to 2011. The southeast area rate, though the highest of the three areas, has halved since 2005 and was only

1.33 arrests per 100,000 population higher than the state rate in 2011. Marijuana was the drug most frequently (and in some areas the only) resulting in juvenile arrests.

Health

There were four indicators selected to characterize adult health in the southeast area: MedStar Franklin Square uncollected billing (divided into bad debt and charity care and serving as a proxy for uninsured) and deaths from heart disease, cancer and diabetes. "Bad debt" refers to bills incurred but not yet paid, and in FY 2012,[1] southeast area bad debt ranged from $46,845 per 1,000 population in one ZIP code to $142,558 per 1,000 population in another. Charity care, which is free or reduced-price care for those who are deemed unable to afford it, largely mirrored bad debt in the southeast area in FY 2012. Deaths from heart disease steadily declined in all areas from 2000-2009 data, and only 0.3 percent separated the rates of the three areas by 2005-2009 data. Cancer deaths also declined in the southeast area during this period, though the southeast area still had a slightly higher rate than the county and state in 2005-2009 data. Diabetes death percentages in the southeast area waivered less than one percent in the 10-year time span observed in this report.

Welfare

The economic stability of an area can often be reasonably ascertained by observing the public benefits received in the area. For that purpose, this report utilized Supplemental Security Income (SSI) recipiency and public assistance income as its indicators. SSI recipiency, which benefits the elderly, blind and disabled, was highest in ZIP code 21224, which had 21,214 recipients per 100,000 population in 2010. Cash public assistance, more commonly referred to as welfare, was estimated at rates between 1.3 percent and 3.8 percent in southeast area ZIP codes from 2007-2011. The Supplemental Nutritional Assistance Program (SNAP) benefits percentages in the southeast area from 2007-2011 were all estimated at the same or higher rates than Baltimore County.

Housing

The indicators of homeownership, Section 8 housing availability and the Section 8 housing waitlist were chosen to examine the housing landscape of the southeast area. Homeowners who occupy the units they own typically add value to a neighborhood. Despite the housing market decline between 2000 and 2010 in the U.S., the southeast area actually experienced an owner-occupancy rate increase of 1.5 percent in that 10-year span. This increased percentage is higher than that of the U.S. as a whole. The Housing Choice Voucher program, which was previously known as Section 8, provides a housing subsidy to those who are very low income, elderly or disabled. From 2007 to 2011, Section 8 housing availability rose by 8.2 households receiving vouchers per 100,000 population. In that same time span, the Section 8 housing waitlist in the southeast area almost doubled as a proportion of recipients.

Adult Crime

Crime presents a challenge in any area, so it was important for the planners in the southeast area to understand problem areas. As opposed to arrests, this assessment examined adult crime by reported violent, property and domestic violence crime. As with juvenile crime, declines were experienced across all areas for reported violent and non-violent crime in the southeast area from 2005 to 2011. The southeast area had the highest reported rates for both violent and non-violent crimes in 2011, with reports of aggravated assaults and thefts being most common. Domestic violence reports also declined in all areas from 2005 to 2011. While the southeast area had a higher reported rate than Baltimore County for these types of crimes, its rate was less than half that of the state in 2011.

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[1] MedStar Franklin Square's fiscal year runs from July 1 to June 30.

Crimes Against Senior Citizens

To measure the vulnerability of the senior population in the southeast area, reports of violent, property and less-serious crimes against seniors were reviewed. Seniors are defined as people 65 years or older. As with the other crime indicators used in this report, those with senior victims declined from 2005 to 2011 for violent and less serious crimes. However, property crimes with senior victims increased in the southeast area during this period. Thefts were again the most common type of this crime committed

Chapter One: Introduction

1.1 History and Purpose

1.1.1. The Southeast Network

The Southeast Network is a volunteer coalition of public and private entities working to improve health and well-being in the southeastern portion of Baltimore County (which will be referred to as "the southeast area" in this report). Historically, the Network was facilitated by the Baltimore County Office of Community Conservation as an *ad hoc* group over ten years ago to address the needs of residents in a low-income housing complex called Tall Trees. The Network assisted with resident needs and disbursement when the complex was demolished. Since that time, the Network has expanded to consider and address housing and resident concerns for the entire southeast area.

The Network consists of representatives from the Baltimore County Department of Health (BCDH), (which encompasses the Baltimore County Department of Social Services), the Baltimore County Local Management Board (BCLMB), the Baltimore County Office of Community Conservation (OCC), MedStar Franklin Square Medical Center (MedStar Franklin Square) and members who are citizen activists and representatives from a variety of non-profit organizations, educational institutions and government agencies (see figure 1.1).

Figure 1.1	
Organizational Representation of the Southeast Area Network	
Abilities Network, Healthy Families Baltimore County Alliance	Creative Kids
Baltimore County Department of Social Services	Dundalk Youth Service Centers
Baltimore County Health Department	Department of Parole and Probation
Baltimore County Office for Community Conservation	Department of Aging
Baltimore County Police Department	MedStar Franklin Square Medical Center
Baltimore County Public Library	Johns Hopkins Bayview Medical Center
Catholic Charities	Parent Support Services
Center for Pregnancy Concerns	Streets of Hope
Churches for Streets of Hope	The Family Tree
Community Assistance Network	The Other Side Counseling
Community College of Baltimore County	Young Parent Support Center
Source: Kingeter 2012a.	

1.1.2. Community Health Needs Assessment: A History

In 2008, the Network published a needs assessment that collected baseline information on the health and wellness of the southeast area. This study also identified next steps for the Network to take in order to improve the overall quality of life for the residents it monitors. This project was influenced by the MAPP process ("Mobilizing for Action through Planning and Partnerships"), which was developed by the National Association of County and City Health Officials and the U.S. Centers for Disease Control and Prevention (CDC) (see figure 1.2).

The purpose of this 2008 project was threefold: (1) to assess the current health and well being of the southeast area, (2) to identify service and health discrepancies and (3) to develop a strategic plan for correcting the discovered discrepancies. Assessment and identification were completed through the collection of data related to 27 indicators of health and well-being. These indicators were grouped by age

Figure 1.2

The MAPP Process

Source: NACCHO 2008.
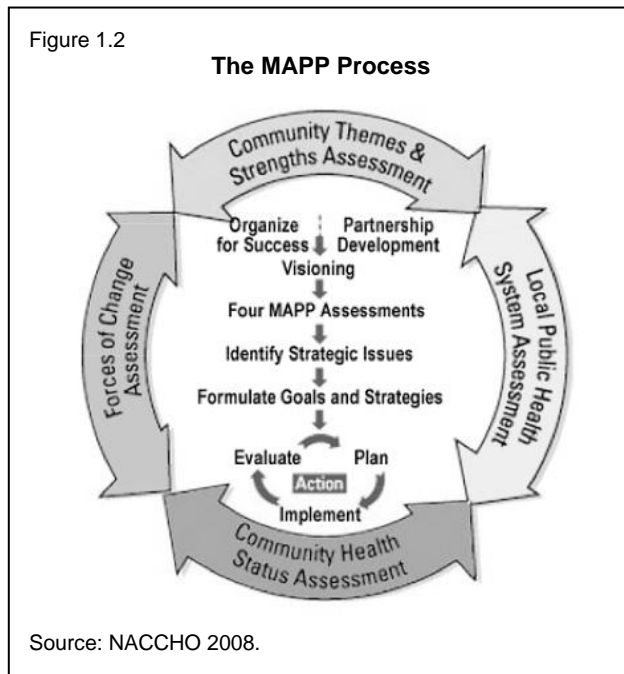
and divided into ten priority areas. In order to confirm that statistical findings correctly correlated with public opinion, three focus groups were held to engage the community in the study.

Once analysis was completed, the Network established a strategic plan to better the southeast area. The Network formed two subcommittees based on the age groups studied: (1) children and youth and (2) adults and seniors. These subcommittees formed goals, objectives and action steps to address the most grievous problems identified by the data. InterGroup Services (IGS), a Baltimore-based consulting company, facilitated the project, including collection, analysis and presentation of requested data to the Network's subcommittees. IGS also moderated discussions on goals and objectives and conducted the focus groups.

1.2 Methodology

The MAPP process calls for a reassessment of the original baseline data. This 2013 report is an update of the Network's 2008 needs assessment and a reevaluation of the southeast area's health and well-being. MedStar Franklin Square engaged InterGroup Services to examine changes to the southeast area and evaluate the impact of the Network's efforts to curtail disparities and improve quality of life. This section will describe the methods used in the original study as well as the processes used to assess the state of the southeast area today.

1.2.1. Selection of Indicators

For the purposes of this report, the term "indicators" refers to concrete, quantifiable qualities of a community that can be used to assess the status of and trends in that community's health status. In order to choose indicators that would enable policy makers and health planners to set specific goals and measure progress, the Network established three main requirements for each indicator: (1) each must be relevant to a specific age category, (2) each must be measurable by available data and (3) each must be comparable with county- and state-level data.

As the Network wished to understand the factors that affected all community members, indicators had to be chosen to correspond with the most important factors of each stage of life. For example, the lives of children and youth revolve around the need for a nurturing environment and successful education. Thus, appropriate indicators for this age category include an assessment of topics such as child abuse, kindergarten readiness and college attendance after high school.

The measurability of an indicator is essential to the success of any study. A successful indicator is one that has an established data source that is possible to track over time. For example, it may be ideal to know how many juveniles use drugs in a specific ZIP code, but this information is not possible to obtain. A measurable proxy for this indicator can be found in the juvenile arrest rates for drug-related crimes. Although this indicator is not an exact measure of youth drug use, it is based on data that are collected regularly and can be compared to other times and locations.

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This also addresses the Network's final requirement for indicators — comparability. One cannot understand data in a vacuum; in order to know how well a community is doing, its data must be compared to those of other communities. Data are collected by ZIP code for the southeast area and evaluated by measuring them against each other, and against data from Baltimore County and the state of Maryland. By comparing data in the southeast area with other regions, one will be able to identify problems that are exclusive to the southeast area and make efforts to mitigate them.

In addition to the discussed requirements, data used to measure indicators must also be collected identically in order to make accurate comparisons over time. If data are not measured in the same way, they will not be useful for the analyses necessary for conducting such a study. For example, if data are collected for a neighborhood, the boundaries for that neighborhood must be defined in the same manner for all indicators, or conclusions drawn from those data cannot be compared.

For the 2008 study, indicators were selected from a number of sources and screened by IGS for viability. Members of the task force used several sources to inform their choice of indicators, such as the 2006 report to the Maryland Children's Cabinet, *Maryland's Results for Child Well-being* (CC 2006), which recommended indicators for needs assessment projects involving children. Other sources used included members' experiences living or working in the area. Some proposed indicators could not be used due to limited or unavailable data. Twenty-seven indicators were selected in total.

Two subcommittees were created to address these indicators. One committee focused solely on children and youth and the other on adults and seniors.[2] Amongst the children and youth indicators, five priority areas were selected: infants, early education, later education, safety, and crime. The adults and seniors category used health, welfare, housing, crime and crime against seniors as the five priority areas. The 27 indicators were then sorted under these categories and priority areas for analysis. Due to data reporting changes, some indicators used in the 2008 report could no longer be utilized for the current report and alternatives had to be selected. The indicators used in the 2008 and 2013 reports are shown in figure 1.3.

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[2] Although seniors are considered a unique age subcategory, data on seniors were included in the adult sub-category as well. Information exclusive to seniors (such as crime rates) was considered separately from the adult sub-category in addition to the overall analysis of the adult population.

Figure 1.3		
Age Groups, Priority Areas and Indicators for the Southeast Area Needs Assessment: 2008 and 2013		
Children and Youth Subcommittee		
Priority Area	**Selected Indicator**	
	2008	**2013**
Infants	Infant mortality Low birth weights Births to Hispanic mothers Births to teenage mothers	Infant mortality Low birth weights Births to Hispanic mothers Births to teenage mothers
Early education	Child-care availability Work Sampling System scores (kindergarten readiness)	Child-care availability Work Sampling System scores (kindergarten readiness)
Later education	Maryland School Assessment scores Chronic school absenteeism High school dropouts Graduating seniors with plans to attend four-year colleges	Maryland School Assessment scores Chronic school absenteeism High school leaver rate Graduating seniors with plans to attend four-year colleges
Safety	Child abuse and neglect	Child abuse and neglect
Crime	Juvenile arrests, violent crime Juvenile arrests, non-violent crime Juvenile arrests, drug-related	Juvenile arrests, violent crime Juvenile arrests, non-violent crime Juvenile arrests, drug-related
Adult and Senior Subcommittee		
Priority Area	**Selected Indicator**	
	2008	**2013**
Health	MedStar Franklin Square uncollected billing Deaths from heart disease Deaths from cancer Deaths from diabetes	MedStar Franklin Square uncollected billing and charity care Deaths from heart disease Deaths from cancer Deaths from diabetes
Welfare	Supplemental Security Income (SSI) recipiency Public-assistance-income recipiency	Supplemental Security Income (SSI) recipiency Public-assistance-income recipiency
Housing	Homeownership Section 8 housing availability	Homeownership Section 8 housing availability
Crime	Reported violent crime Reported non-violent crime Reported domestic violence	Reported violent crime Reported non-violent crime Reported domestic violence
Crime (against seniors)	Reported violent crime against seniors Reported non-violent crime against seniors Reported "less serious" crime against seniors	Reported violent crime against seniors Reported non-violent crime against seniors Reported "less serious" crime against seniors

1.2.2. Data Collection, 2008 Report

The 2008 needs assessment collected both quantitative and qualitative data to more broadly understand the needs of the southeast area. Quantitative data collection included the collection of three sets of relevant statistical data: (1) for the southeast area, (2) for Baltimore County and (3) for Maryland. Data for the southeast area were identified using area ZIP codes. The ZIP codes correspond approximately to the following neighborhoods:

Perry Hall: 21128
Raspeburg: 21206
Sparrows Point: 21219
Middle River: 21220
Essex: 21221

Dundalk: 21222
Highlandtown/O'Donnell Heights: 21224
Overlea/Nottingham: 21236
Rosedale: 21237

Five of these ZIP codes — 21206, 21222, 21224, 21236 and 21237 — overlap with Baltimore City.

This is problematic to the accurate reporting of statistical data on either region, since using these data would include all people living in the ZIP code, regardless of county jurisdiction. ZIP codes are not designed to serve as geographic subdivisions, but to meet the needs of the U.S. Postal Service (USPS) and therefore do not necessarily correspond with the tracts and block groups defined by the U.S. Census Bureau, from where most of the report's statistical data is retrieved. In an effort to overcome these difficulties, the U.S. Census Bureau has created ZIP Code Tabulation Areas (ZCTAs). These areas, first used in the 2000 U.S. Census, allow researchers to correlate ZIP code areas with census-defined areas and therefore analyze only the relevant populations to the jurisdiction being studied. This study used the ZCTAs when accessing data for the aforementioned ZIP codes, using a Maryland Department of Planning (MDP) product that separated census data by jurisdiction. Since the ZCTAs are only used to filter U.S. Census Bureau data, any statistics derived from other sources were collected from organizations that first filter by jurisdiction, meaning no Baltimore City information is included (CB 2011a).

In addition to the Census Bureau and MDP, IGS consulted a variety of agencies and organizations to gather data, including but not limited to:

- Baltimore County Police Department (BCPD).
- Maryland Department of Health and Mental Hygiene (DHMH).
- Maryland Child Care Resource Network (MCCRN).
- Maryland State Police (MSP).
- Maryland State Department of Education (MSDE).
- Maryland Department of Human Resources (DHR).

From these data, IGS created at least two graphs for each indicator: (1) a bar graph comparing the southeast area to Baltimore County and Maryland and (2) a bar graph comparing the seven southeast area ZIP codes/ZCTAs.[3] In addition to these graphs, some indicators also warranted the use of line graphs to demonstrate and compare trends over time. Based on these graphs, The Network identified target populations and topics for its focus groups and, combined with this qualitative data, devised goals and objectives for the action plan for improvement.

The 2008 report also used qualitative analysis to further delve into the problems facing those living in the southeast area. The qualitative method, as opposed to the quantitative method, uses nonmathematical

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[3] The exception to this was the indicators for MedStar Franklin Square uncollected billing and the three indicators under the priority area of crimes against senior citizens. Comparable state and county data were unavailable for the former and state data for the latter.

processes of gathering and analyzing data. While quantitative data analyses find trends and patterns of frequency in the data used, qualitative analyses involve such techniques as observation and interviews to collect data. The qualitative technique used in this study was the focus group, which is a small (usually 8-12 person) subset of the target group that participated in a structured, moderated discussion designed to explain its opinions on a topic and offer recommendations to rectify related problems. The current report did not replicate this qualitative research.

1.2.3. Formation of an Action Plan

Once the qualitative and quantitative analyses were completed in spring of 2007, IGS presented the Network with final versions of approximately 90 graphs and the results of the focus groups. Using these data, the Network began the task of formulating a concrete, measurable and attainable set of goals and objectives to address the problems found in the southeast area. To attain this, IGS facilitated meetings amongst the two subcommittees to devise goals and objectives appropriate to each age group based on research findings.

1.3 Needs Assessment Update, 2013

1.3.1 2012 MedStar Franklin Square Community Health Needs Assessment

In accordance with the Patient Protection and Affordable Care Act, MedStar Franklin Square participated in MedStar Health's first system-wide Community Health Assessments (CHA),

An Assessment Task Force (ATF), which included local residents and community partners, reviewed quantitative and qualitative data and provided recommendations for the hospital's health priorities, specifically as they relate to the needs of underserved and low-income communities. The Task Force identified the Community Benefit Service Area (CBSA) a specific community or target population of focus to include neighborhoods in zip codes 21206, 21219, 21220, 21221, 21222, 21224, and 21237.
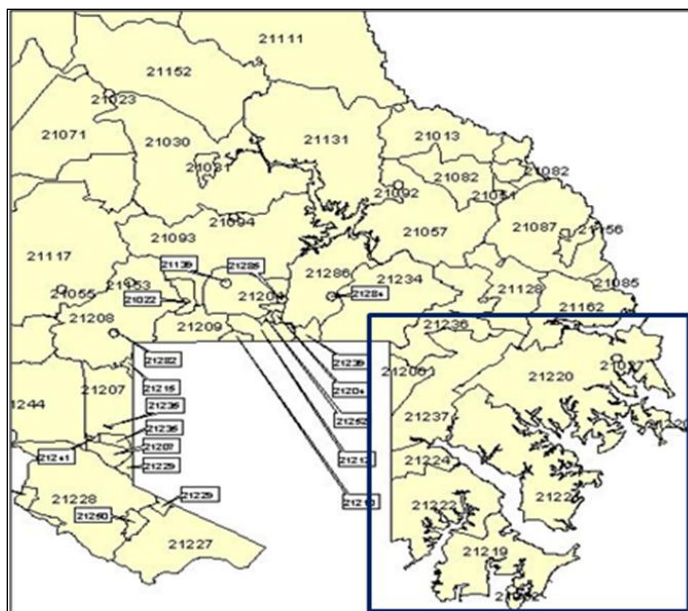
The major focus areas include:
- Asthma management in schools
- Tobacco and drug prevention and cessation resource awareness
- Heart health for seniors

An implementation strategy was developed to guide the hospital's use of its resources and partnerships to address the priorities. This 2012 CHNA and its resulting implementation strategy is available on the MedStar Franklin Square website: http://medstarhealth.thehcn.net/javascript/htmleditor/uploads/MFSMC_Full_Report_CHA_2012_201207 17103704.pdf

For this assessment, data was available only at county level, thus not necessarily representative of the CBSA. MedStar Franklin Square decided to continue its assessment by focusing at the zip code level. The task force members agreed to carry on as an implementation team to coordinate services and ensure progress toward improved community health.

1.3.2 2013 Indicator Update

This update of the needs assessment focuses on the state of the indicators at the present time. In 2012, MedStar Franklin Square contracted with IGS to complete an update to the 2008 needs assessment, showing the changes to the indicators chosen and analyzing the success of the established action plan. Data were analyzed in the same manner as in the 2008 report, with some changes, and the findings were presented to the MedStar Franklin Square's Community Health Needs Assessment (CHNA) task force at meetings between July 2012 and January 2013.

1.3.3. Changes to Measurements

The availability of statistics for measurable outcomes constantly changes. Measures that may have been readily available in one measurement period may be unavailable for years beyond. Several measures that were used to assess indicators in the 2008 report are unavailable now. Although it would be ideal to use the same measurements across time, this is not always possible.
In 2008, the southeast area was consisted of nine ZIP codes and all data were assessed for these ZIP codes both individually and in aggregate. For the 2013 report, two ZIP codes — 21128 and 21236 — were removed from the analysis, as they were not included in MedStar Franklin Square's CBSA. InterGroup Services carefully reanalyzed all data from the 2008 report and removed these ZIP codes from all aggregate data presented in this report. Furthermore, the task force decided to call 21224 "Eastpoint" as a substitute for the Baltimore City corresponding neighborhood name of Highlandtown/O'Donnell Heights and to call 21206 "Overlea" as a substitute for the old neighborhood name of Raspeburg. The southeast area, for purposes of the 2013 report, is:

Overlea: 21206	Dundalk: 21222
Sparrows Point: 21219	Eastpoint: 21224
Middle River: 21220	Rosedale: 21237
Essex: 21221	

In addition to changes in the ZIP codes used in the report, the reporting years used for annual comparisons were altered by the request of the task force. In the previous report, all annual data were measured from 1995 to 2004. Members of the task force instructed IGS to analyze all measures from 2000 to 2009 for this report, keeping a 10-year range of analysis for all indicators that these data are measuring.

In July 2012, the task force also decided to change the way school data were reported. The 2008 report analyzed schools by ZIP code and determined the schools representing each ZIP code based on a geographic overlay of school zones to ZIP code boundaries. This was used as a proxy for the percentage of students from a particular ZIP code attending a specified school. In this way, data from multiple schools were combined to represent each ZIP code. The task force instead opted in July 2012 to report findings for each school individually in the current report, allowing for more precise analysis of school data (Task Force 2012a).

1.3.4. Changes to Reporting Measures

Between 2008 and 2013, several reporting measures changed, affecting the way InterGroup Services was able to access and analyze the data for the task force's chosen indicators. With direction from the task force, data analyses were changed to reflect new reporting methods. In some cases, 2013 data were not comparable to 2008 data and therefore analysis needed to be augmented to capture the most current snapshot of well-being in the southeast area.

1.3.4.1. Poverty and Income Level

In the 2008 report, poverty and income level data were obtained from the 2000 U.S. Census. Unfortunately, the 2010 U.S. Census does not provide either income or poverty ZIP-code-level data. While other sources have been found that provide comparable state- and county-level statistics for these markers, no directly comparable substitutes were found to assess ZIP code level data.

Alternative options were given to the task force in July 2012, such as use of the annual American Community Survey (ACS), but the committee did not find the information adequate (Task Force 2012a). The American Community Survey is an annual survey of communities with more than 65,000 residents. While Baltimore County does participate in the ACS, its jurisdictions are not divided by ZIP code, but by state legislative jurisdiction or by areas with over 20,000 residents. These jurisdictions and/or neighborhoods are not comparable to the southeast area or its component communities and therefore could not be used (MDP 2011a, 2012a-b).

In January 2013, the Census Bureau released ZCTA-level data for the 2007-2011 American Community Survey, which the task force decided to use for poverty and income data (Task Force 2013). This is an aggregate survey for populations with less than 65,000 residents and is comprised of survey results accumulated between 2007 and 2011. Even though the ACS uses samples over a 5-year period, the number of respondents is lower than the number of individuals that participate in the census. This results in a larger standard error in ACS data. To reduce error, the Census Bureau (which is also responsible for the ACS) has a strong follow-up procedure for those who do not respond to the survey. The Census Bureau recommends the use of the 5-year ACS to supplement poverty and income data below state-level populations (CB 2008).

While this information is useful, there are some caveats. First, ACS data are not comparable to census data. Since this is the first time ZCTA-level data have been released from the 5-year ACS, no comparisons with previous years can be made. Due to the way data are collected, there are also differing rates of error, resulting in problems with data analysis and graph generation. For this reason, IGS and the task force also agreed to present all ACS data in tabular format in this report, including the percentage of error for each data set (Task Force 2013).

1.3.4.2. Infant Indicators

Important changes were made in the reporting of infant and youth indicators, with the first being in the reporting of births to teenage mothers. In the 2008 report, the Maryland Vital Statistics Administration (VSA) reported data for teenage births to mothers under the age of 15 separately from those of mothers aged 15 to 19 (Sommers 2006). Due to changes in data reporting, the 2013 data were reported by the VSA

as births to mothers under 20 years old. All previous data were reanalyzed to reflect this regrouping (Sommers 2012).

1.3.4.3. Education

In addition to the Network's decision to analyze school data by individual school, the reporting standards for most of the educational indicators have changed since 2008. Since the last report, federal law governing schools' release of student information has changed. Dependent upon the indicator, some data are suppressed due to the percentage of the student population represented. If an indicator percentage is less than five percent or more than 95 percent of the total population being measured, it is suppressed. In some cases, this percentage is three percent rather than five percent (GPO 2013). This is done to protect the identities of individuals within the five percent.

Due to the suppression rule for schools, the schools' graduation rates were not attainable for the 2010-2011 school year, so comparable data were used instead. This indicator was replaced with the "high school leaver rate," which is the percentage of students who graduated in a year out of those counted in a senior class. This change is reflected in figure 1.3.

1.3.4.4 Crime Statistics

Although comparable, there were changes in the way crime statistics were reported between 2008 and 2011. In terms of violent crime reported for Maryland, the last report included simple assaults in the crime figures. Simple assaults differ from aggravated assaults by the level of harm inflicted on the victim. Aggravated assaults usually involve a weapon and are considered a felony, whereas simple assaults are considered a misdemeanor. It is important to note, moving forward, that simple assaults are not considered a violent crime and these data are not included in the information presented herein (Zuback 2012).

1.3.4.5 MedStar Franklin Square Uncollected Billing

The 2008 community needs assessment used uncollected billing information from MedStar Franklin Square as a proxy for health insurance availability for the southeast area. Since then, MedStar Franklin Square has changed how the it assesses uncollected medical bills. The 2013 report now has two categories under uncollected billing for FY 2012 (July 1, 2011 to June 30, 2012) — charity care and bad debt. Charity care is defined in this report as medically necessary care rendered to patients free or at a reduced cost. Patients who have incomes less than 200 percent of the federal poverty level are entitled to free care and those under 400 percent of the federal poverty level are given reduced-cost care. MedStar Franklin Square policy deems these patients eligible for charity care.

The parameters for bad debt have also been redefined. Bad debt is defined as balances accumulated by patients who are deemed able to pay for services but who have not. In the previous report, bad debt was calculated as the number of uncollected bills per 1,000 population. The current report analyzed bad debt in dollars per 1,000 population. Bad debt is based on patient records only, which may or may not tie to hospital financial statements based on other factors (Isennock 2012a).

1.3.4.6 Supplemental Security Income and Public Assistance

The previous report obtained data for Supplemental Security Income (SSI) and public assistance from the 2000 U.S. Census. These indicators were reported by number of households receiving income from these programs. Unfortunately, the 2010 census did not include data on the number of households receiving SSI or public assistance income and data for these indicators needed to come from different sources.

Supplemental Security Income data used in this report came from the U.S. Social Security Administration through a request under the Freedom of Information Act. The data were reported to IGS as the number of individual recipients in each studied ZIP code. This differs from the 2000 census, which reported the

number of households receiving SSI. No SSI data were available for Baltimore County or Maryland through this new source. These data are not comparable; therefore, this report will only utilize data for the number of individuals receiving SSI in the southeast area and its ZIP codes as recipients per 100,000 population.

Public assistance income was another data set taken from the 2000 U.S. Census in the 2008 report and therefore the same problems were encountered for this indicator for SSI data. Data for the 2013 report were requested from the Baltimore County Department of Social Services, but were not received in time for analysis. As an alternative, the task force decided to analyze comparable American Community Survey 2007-2011 data. As mentioned earlier (section 1.3.2.1), the ACS data are not comparable to previous U.S. Census data and are used with a number of caveats. Furthermore, the data available for this indicator are different from 2008. In the previous report, public assistance included cash assistance, food assistance and assistance for medical bills. The ACS 2007-2011 data do not include information on aid for medical bills, so this will not be included in the 2013 report.

Chapter Two: Demographics and Context

2.1 Baltimore County, Maryland

Baltimore County is arranged in a horseshoe around Baltimore City. Most of its 600 square miles of land are located to the north of Baltimore, with jurisdictions also extending to the east and west of the city (figure 2.1). Baltimore County houses 805,029 persons, which is approximately 14 percent of Maryland's total population. Baltimore County is the third most populous county in the state and has a population density of approximately 2.25 people per square mile (CB 2012a).

2.1.1. Southeast Area's Economic History

The history and economy of Baltimore's southeast area have been shaped by its proximity to the Chesapeake Bay. Its closeness to such a body of water allowed a wide range of manufacturing and commercial entities to flourish. In particular, the steel industry saturated the southeast area, particularly in the Dundalk, Essex and Middle River neighborhoods, from the beginning of the 1900s to the mid-1970s (BCPL 2012a-b).

Figure 2.1

Baltimore County and its Southeast Area

Source: CB 2012a.

Over the last few decades, however, these industries have mostly departed Baltimore, leaving an economic gap that was once filled by well-paid manufacturing jobs. Recently, there has been an interest among government entities to revitalize these areas in transition. Efforts include the revitalization of infrastructure to help improve and develop these neighborhoods (BCPL 2012a).

2.2. The Southeast Area in Context

Of the 68 ZIP codes that make up Baltimore County, this report will focus on the seven in the southeast area of the county, to the east of Baltimore City. The ZIP codes correspond approximately to the following neighborhoods: Overlea (21206), Sparrows Point (21219), Middle River (21220), Essex (21221), Dundalk (21222) Eastpoint (21224) and Rosedale (21237). Four of these ZIP codes — 21206, 21222, 21224 and 21237 — overlap with Baltimore City and require the use of ZIP code tabulation areas to ensure that the measures used are applicable solely to Baltimore County. This report uses the terms "ZIP code" and "ZIP code tabulation area" interchangeably.

2.2.1. Population

The southeast area is home to 193,790 people, according to the 2010 census, and accounts for approximately 24 percent of the county's overall population (MDP n.d. b).

As seen in figure 2.2, ZIP code 21222 is the most populous with 53,934 residents, followed by 21221 (42,154 residents), 21220 (39,199 residents), 21237 (30,012 residents) and 21206 (10,462 residents). The two neighborhoods with the smallest populations are 21219 (9,379 residents) and 21224 (8,650 residents).
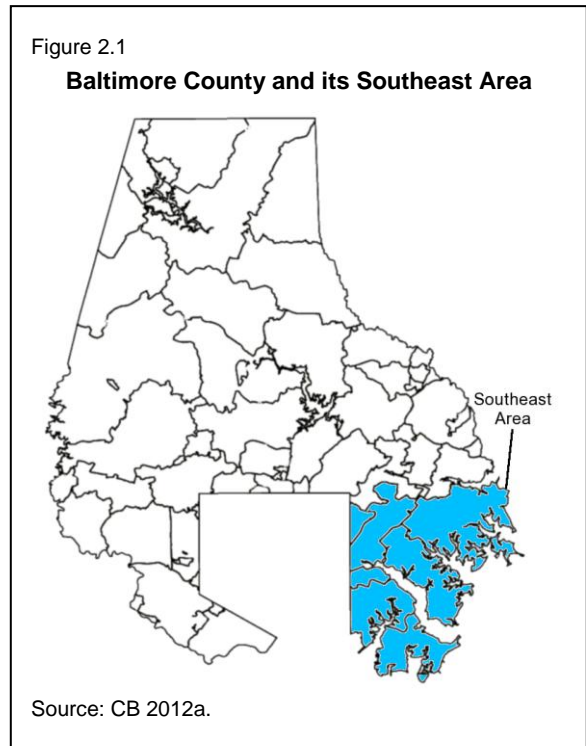
Figure 2.2			
Population by ZIP Code Tabulation Area (ZCTA)			
in the Southeast Area of Baltimore County, 2000 and 2010			
ZIP Code or Area	**Population, 2000**	**Population, 2010**	**Population Change**
21206	10,805	10,462	-3.17%
21219	9,184	9,379	2.12%
21220	36,315	39,199	7.94%
21221	42,688	42,154	-1.25%
21222	53,535	53,934	0.74%
21224	8,490	8,650	1.88%
21237	25,316	30,012	18.55%
Southeast Area	186,333	193,790	4.00%
Source: MDP n.d. b.			

Since the 2000 census, the southeast area has seen an increase of 4.00 percent in its overall population, with the most significant population increase seen in ZIP code 21237 (18.55 percent increase), followed by 21220 (7.94 percent), 21219 (2.12 percent), 21224 (1.88 percent) and 21222 (0.74 percent). Although most ZIP codes have seen an increase in population, ZIP codes 21206 and 21221 have experienced negative population growth, with a decrease of 3.17 percent and 1.25 percent, respectively (MDP n.d. b).

2.2.2. Age

Age is part of what determines the needs of a person and, in turn, what is required of a community for the well-being of its members. For example, young residents (5 to 19 years old) are most in need of infrastructure related to education, such as good schools. Residents in the 20-49 year old range have different needs, such as gainful employment and safe, affordable housing. Residents 50 and older, while requiring many of the same accommodations, also have the added needs that come with age, such as those relating to retirement and health. Figure 2.3 displays the age breakdown of each ZIP code within the southeast area. For the most part, the age distribution within each ZIP code is homogeneous, with age percentages falling close to the southeast area average. The largest age group in the southeast area is the 20 to 49 range, which makes up 40.98 percent of the population. The next largest population percentage is comprised of residents 50 and over, who make up 29.51 percent of the overall population, followed by those in the 5 to 19 year old range, who account for 18.8 percent of the southeast area (MDP n.d. b). These numbers show an aging of the population, which can hold significant consequences for an area, especially when examining health indicators. A more detailed look at age in the southeast area can be found in appendix A.

Figure 2.3											
Population Percentages by Age and ZIP Code in the Southeast Area of Baltimore County, 2010											
	< 5 years old	**5-9**	**10-14**	**15-19**	**20-29**	**30-39**	**40-49**	**50-59**	**60-69**	**70-79**	**> 80 years old**
21206	6.09%	6.61%	7.34%	8.10%	12.43%	12.86%	15.04%	13.91%	8.98%	5.02%	3.63%
21219	4.90%	5.34%	6.25%	7.27%	10.30%	9.82%	15.94%	16.93%	11.26%	7.21%	4.78%
21220	7.06%	6.06%	6.34%	6.38%	14.76%	13.22%	14.25%	14.09%	9.74%	5.09%	3.28%
21221	7.01%	6.13%	5.95%	6.58%	14.49%	12.30%	14.08%	14.30%	9.60%	5.64%	3.92%
21222	6.43%	6.06%	6.17%	6.90%	13.79%	11.77%	14.07%	14.54%	9.68%	6.24%	4.35%
21224	6.45%	6.39%	6.06%	6.25%	14.36%	12.88%	13.63%	13.70%	8.10%	6.37%	5.80%
21237	6.79%	6.05%	5.48%	5.82%	15.13%	14.96%	13.63%	13.73%	8.81%	5.42%	4.17%
S.E. Area	6.65%	6.08%	6.11%	6.61%	14.13%	12.69%	14.16%	14.32%	9.45%	5.74%	4.06%
Source: MDP n.d. b.											

2.3. Race and Ethnicity in the Southeast Area

Both racially and ethnically, the southeast area is still predominantly white (72.37 percent of total population), as in 2000. As seen in figure 2.4, African-Americans are the second most populous race at 19.58 percent, and Hispanics are the third largest group at 4.48 percent of the total area population.[4]

Asian/Pacific Islanders are the second smallest population at 2.70 percent of the total and American Indians/Alaska Natives represent a mere 0.64 percent of the southeast area's total population (MDP n.d. b).
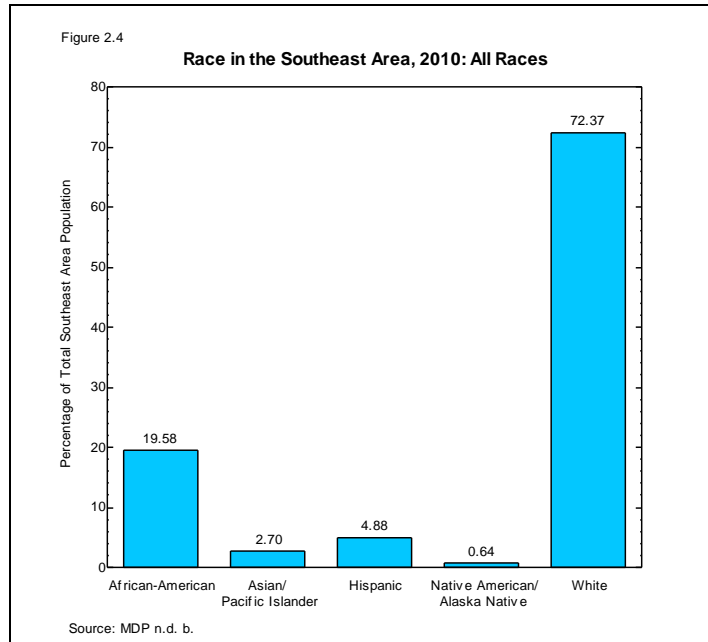
Racial and ethnic diversity has not increased at the same rate in all parts of the southeast area. Amongst the three largest ethnic and racial categories, there are significant differences when comparing the ZIP codes. Figure 2.5 shows the racial breakdown of each ZIP code for five race categories. White residents represent approximately 73 percent of the entire southeast area, but represent as much as 92.72 percent of 21219 and as little as 54.64 percent of 21206. ZIP code 21222 consists of 81.24 percent white residents, followed by 21224 at 80.76 percent, 21220 at 73.0 percent and 21221 at 67.88 percent. At 59.35 percent, Rosedale (21237) has the second smallest percentage of white residents.

Figure 2.4

Race in the Southeast Area, 2010: All Races

Source: MDP n.d. b.

The largest percentages of African-American residents were found in ZIP codes 21206 (40.58 percent), 21237 (27.24 percent) and 21221 (25.09 percent). The lowest percentages of this population in the

Figure 2.5

Race and Ethnicity by ZIP Code, 2010: All Races

ZIP Code or Area	African-American	Asian/Pacific Islander	Hispanic	American Indian/ Alaska Native	White
21206	40.58	1.06	2.58	0.58	54.65
21219	4.16	1.03	1.33	0.43	92.71
21220	19.38	2.48	4.97	0.56	73.00
21221	25.09	1.84	4.91	0.51	67.88
21222	11.67	1.64	4.21	0.91	81.24
21224	7.79	1.71	10.07	1.20	80.76
21237	27.24	7.50	6.34	0.45	59.35
Baltimore County	26.10	5.58	4.20	0.35	64.60
Source: MDP n.d. a-b.					

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[4] Although "Hispanic" is usually considered an ethnic category, meaning that a person identifying as Hispanic can be of any race, the MDP product used to obtain ZIP code-level data categorized Hispanic as an exclusive racial category.

southeast area were seen in Middle River (21220) with 19.38 percent, 21222 (11.67 percent) and 21224 (7.79 percent). Sparrows Point (21219) had the lowest African-American representation as a percentage of the population, at 4.16 percent (MDP n.d. a-b).

Although Hispanics are the third most populous group in the southeast area, there is only one ZIP code where this group is represented at more than 10 percent of the total population (21224 at 10.07 percent). Second to this neighborhood, the Hispanic population is highest in 21237 (6.34 percent), followed by 21220 (4.97 percent), 21221 (4.91 percent) and 21222 (4.21 percent). The Hispanic community has the smallest percentage representation in 21219 (1.33 percent) and 21206 (2.58 percent).

Across the southeast area, the Asian/Pacific Islander community shows uneven representation, with large differences in the population across ZIP codes (figure 2.5). This population comprised the largest percentage of the population in 21237 (7.50 percent). The next largest population, seen in 21220, was only 2.48 percent of that ZIP code's population. This percentage was followed by 21221, at 1.84 percent, 21224, at 1.71 percent, and 21222, at 1.64 percent. The smallest percentages of Asian/Pacific Islanders were in 21219 (1.03 percent) and 21206 (1.06 percent).

The American Indian/Alaska Native group, the smallest population, only represented 0.64 percent of the total southeast area population. This group was also unevenly spread out across the southeast area, with the largest population percentage seen in 21224 (1.20 percent). Percentages of this population in ZIP codes 21222 (0.91 percent), 21206 (0.58 percent), 21220 (0.56 percent) and 21221 (0.51 percent) followed. The ZIP codes that had the smallest percentages of American Indian/Alaska Natives are 21237 and 21219, which had only 0.45 and 0.43 percent of this population, respectively (MDP n.d. a-b).

Figure 2.6

**Race in the Southeast Area: All Races
Comparison of 2000 and 2010 Census Data**

Source: MDP n.d. a-b.
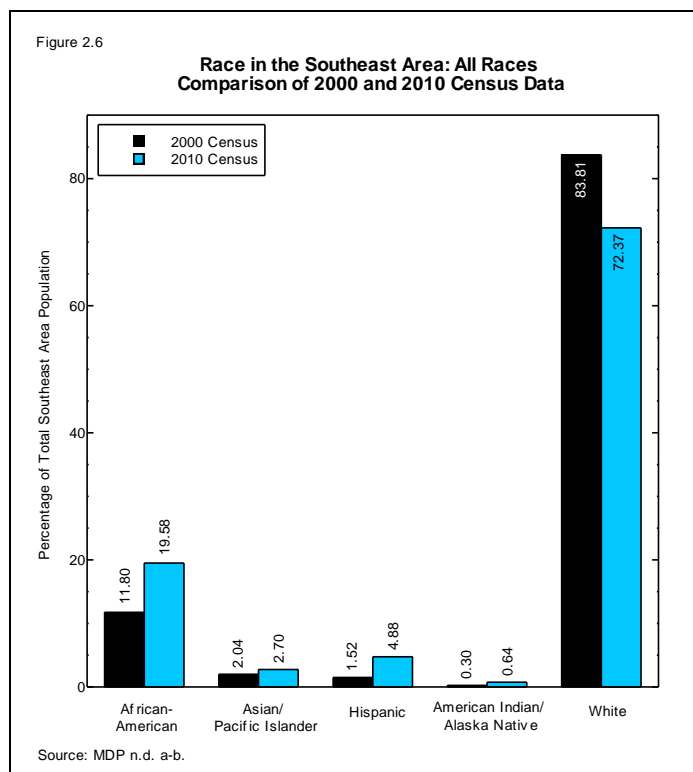
2.3.1 Demographic Change, 2000 and 2010

Significant changes in the makeup of the southeast area's neighborhoods have occurred since the Network last examined its demographics. As seen in figure 2.6, the last decade has yielded a marked increase in the proportion of African-American and Hispanic residents in southeast area neighborhoods and a noticeable decrease in the proportion of white residents. The white population in the southeast area decreased from 2000 and subsequently accounted for 11.44 percentage points less of the area population in 2010. Within this 10-year period, all other groups experienced population increases: African-American population (7.78 percentage points); Hispanic population (3.36 percentage points); Asian American/Pacific Islander population (0.66 percentage points) and the Native American/Alaska Natives population (0.34 percentage points) (MDP n.d. a-b).

Of the three largest populations of residents in the southeast area, the only group that has seen an overall negative growth rate as a percentage of the total is the white population, as seen in figure 2.7. This decrease in white residents is not only the only racial population decrease witnessed in the southeast area, but it is also the largest change over time documented for the area. Like other populations, this average is not split evenly across all ZIP codes being studied, but varies greatly between them. Four neighborhoods in the southeast area show double-digit percentage point decreases in the white population: Rosedale (21237) at 19.58 percent, Eastpoint (21224) at 15.54 percent, Overlea (21206) at 13.91 percent and Middle River (21220) at 10.98 percent. Smaller but still significant percentage point decreases in population were observed in Essex (21221) at 8.30 percent and Dundalk (21222) at 6.95 percent. The smallest decrease in the white community was seen in Sparrows Point (21219) with a 0.81 percentage point population decrease (MDP n.d. a-b).

As seen in figure 2.8, the African-American community has an increased presence in almost all studied ZIP codes, with the exception of Sparrows Point (21219), which experienced a 0.95 percentage point decrease in population. In Eastpoint (21224), the population experienced a dramatic increase from 0.85 percent of the neighborhood's population to 7.79 percent, representing growth of 6.94 percentage points. Following this, percentage point increases in this population were seen in Rosedale (21237) at 11.50 percent, Middle River (21220) at 7.41 percent, Overlea (21206) at 13.26 percent, Dundalk (21222) at 2.83 percent and Essex (21221) at 5.77 percent (MDP n.d. a-b).

Figure 2.7

Whites by ZIP Code: 2000 and 2010 Census Comparison

Figure 2.8

African-Americans by ZIP Code: 2000 and 2010 Census Comparison

19

Figure 2.9

Hispanics by ZIP Code: 2000 and 2010 Census Comparison
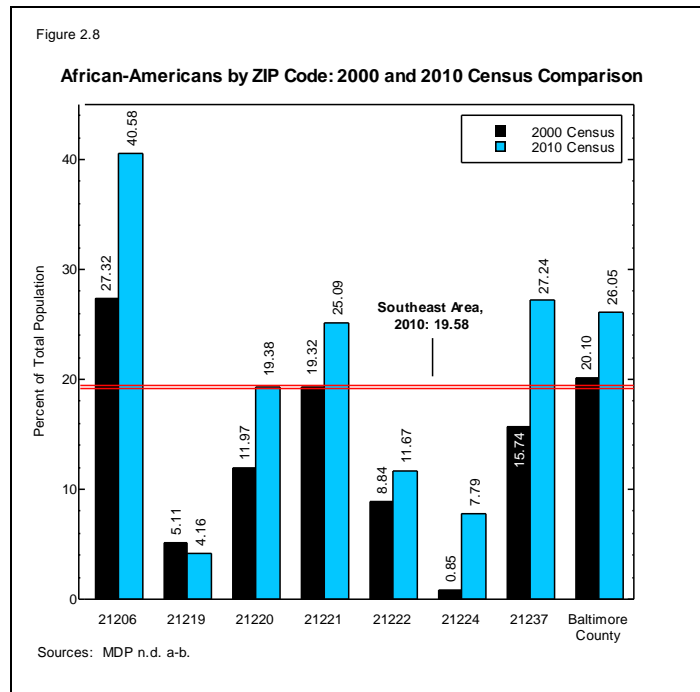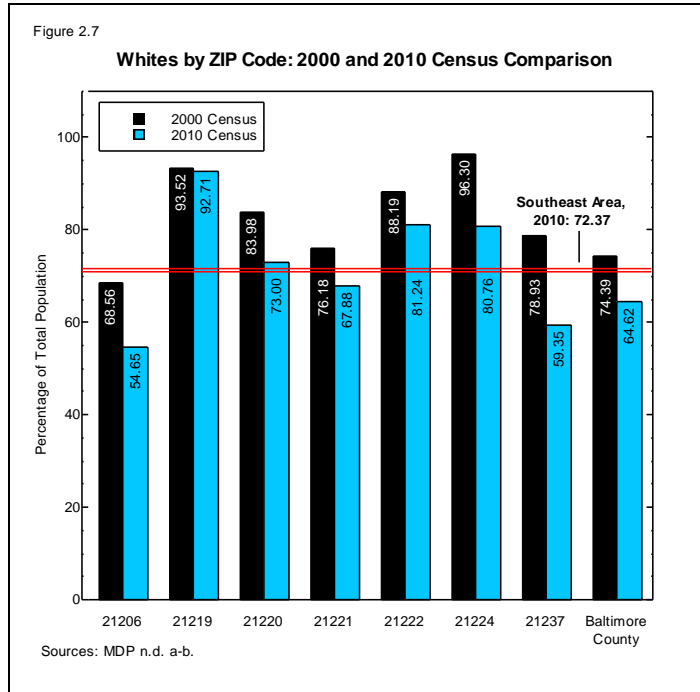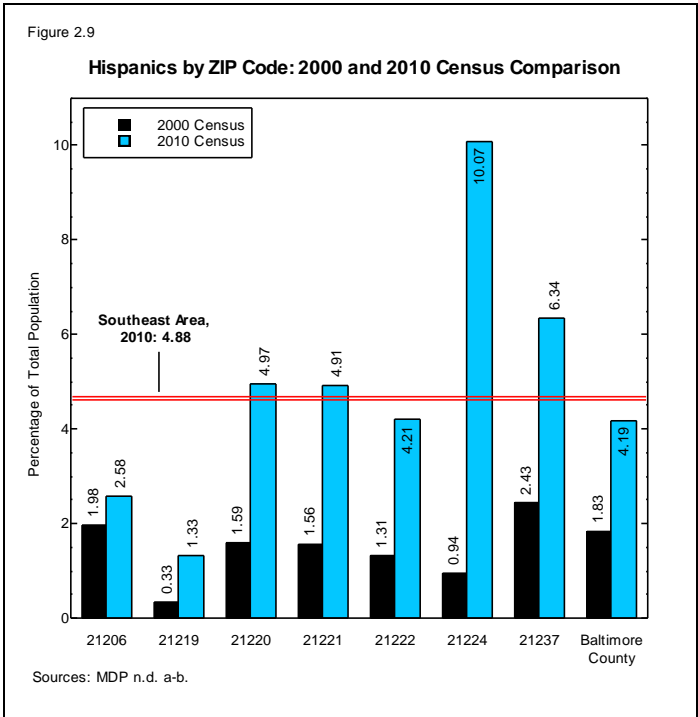
Much like the African-American community, the Hispanic population has seen a rapid increase in numbers over the last decade. This is especially important when addressing the health concerns of the southeast area, as the Hispanic population is identified in some health indicators that will be discussed in Chapter Three. As seen in figure 2.9, all ZIP codes have seen an increase in Hispanic residents. Much like its overall representation, the Hispanic population has seen a markedly uneven rate of growth across the southeast area. Eastpoint (21224) has grown the most, with a 9.13 percentage point increase, and Rosedale (21237) showed the second highest growth, at 3.91 percentage points. The increases in other ZIP codes are as follows: Middle River (21220) at 3.38 percentage points, Essex (21221) at 3.35 percentage points, Dundalk (21222) at 2.90 percentage points, Sparrows Point (21219) at 1.00 percentage points and Overlea (21206) at 0.6 percentage points (MDP n.d. a-b).
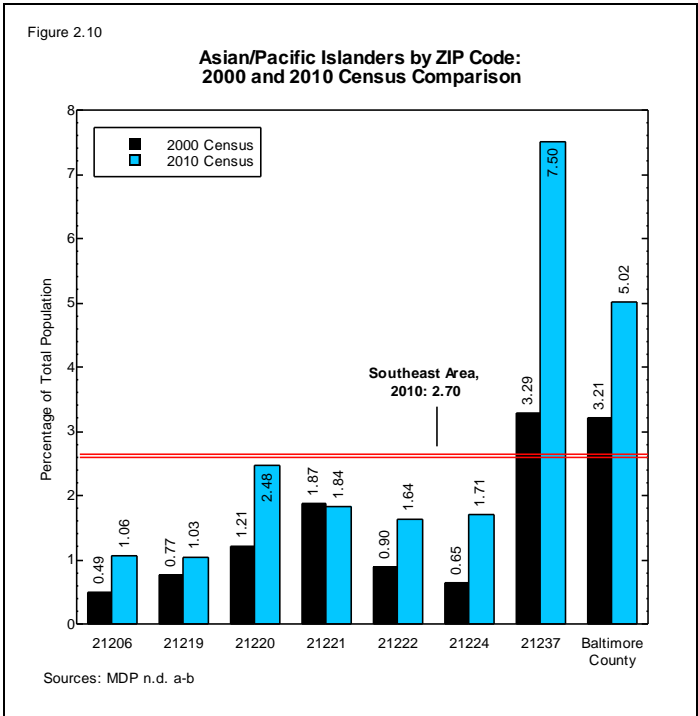
The Asian/Pacific Islander community saw small changes in population between 2000 and 2010. As seen in figure 2.10, all ZIP codes but one had increases in this population and no ZIP code experienced an increase or decrease of over five percentage points. Essex (21221) had a nearly insignificant decrease in this population at 0.03 percentage points. The largest increase in the Asian/Pacific Islander population was seen in Rosedale (21237) at 4.21 percentage points. Following this, the largest percentage point increases were seen in Middle River (21220) at 1.27 percent, Eastpoint (21224) at 1.06 percent, Dundalk (21222) at 0.74 percent and Overlea (21206) at 0.57 percent. The smallest increase was seen in Sparrows Point (21219) at 0.26 percentage points.

Figure 2.10

Asian/Pacific Islanders by ZIP Code: 2000 and 2010 Census Comparison

20

Finally, the Native American/Alaska Native population has the smallest representation in the southeast area, representing only 0.64 percent of the area population. Figure 2.11 shows that this group has seen increases in population in all but one ZIP code, Overlea (21206), which had a 0.19 percentage point decrease. This population increased in all other ZIP codes. Eastpoint (21224) has seen the largest change at 0.89 percentage points, followed by Dundalk (21222) at 0.52 percentage points, Rosedale (21237) at 0.32 percentage points, Sparrows Point (21219) at 0.30 percentage points, Essex at 0.19 percentage points and Middle River (21220) at a scant 0.10 percentage points increase (MDP n.d. a-b).

Figure 2.11

Native American/Alaska Natives by ZIP Code: 2000 and 2010 Census Comparison

Sources: MDP n.d. a-b.
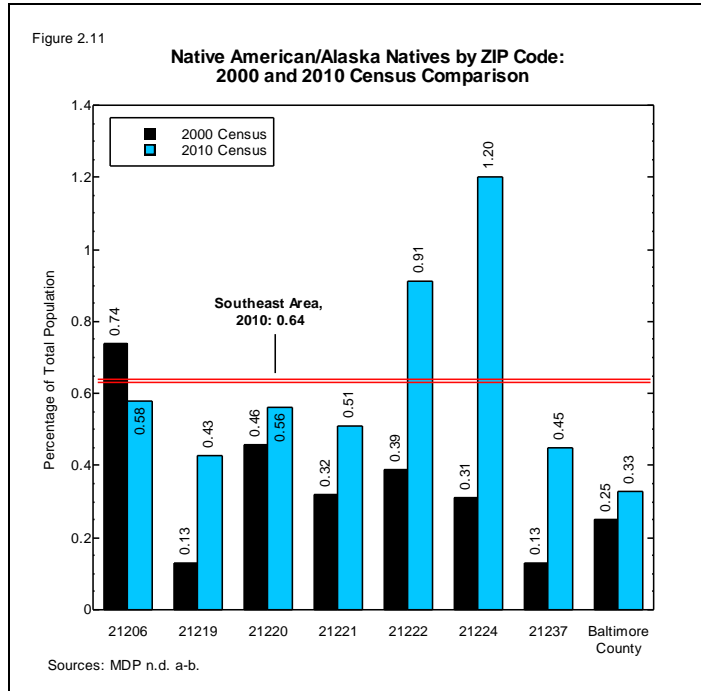
2.4 Income and Poverty

Poverty and quality of life are strongly correlated. The less income an individual or family has, the less likely it is to be able to acquire the necessities of life, such as nutritious food, safe living conditions and medical care. Poverty affects all aspects of life, from health to crime. A large body of research shows that children raised in impoverished conditions are in worse health than those who are economically better off. People who are poor at birth are significantly more likely to drop out of high school than those who are more financially stable. Poverty is also linked to poorer life outcomes in adults, placing them at greater risk for future poverty status (Ratcliffe and McKernan 2010), obesity and diabetes (Chambers, Duarte and Yang 2009). This study also shows a link between poverty and criminal acts, as well as risky health behaviors, such as tobacco and alcohol use. Those who live in poverty are also less likely to participate in the job market (GAO 2007). Poverty, therefore, is not only an economic indicator but also a gauge of life outcomes.

Income and poverty measures in this report come from the American Community Survey, which is an additional tool the Census Bureau uses between decennial census surveys. The ACS produces annual reports for population areas of 65,000 residents or more. For areas with fewer people, reports are issued in three- or five-year intervals. These reports are aggregate reports of a range of years and therefore do not represent any single year within the survey period. This report uses the 2007-2011 ACS 5-year report, which is broken down by ZIP code tabulation area (ZCTA).

Data from the ACS, while valuable, are considered estimates of each indicator for the designated population. Responses are self-reported by participants through paper surveys or interviews. These estimates also have differing margins of error, which are indicated in the tables below. As shown, the smaller the sample size becomes, the higher the margin of error is, making the ZIP code estimations less reliable than those made for Baltimore County and Maryland. Due to the nature of the data, estimates could not be calculated for the southeast area as a whole, but estimates for each of its ZIP codes are given in the report.

2.4.1. Estimated Income

This report will explore income in two ways for each of the studied areas — through estimated median income per household and through estimated percentages of households in a range of income brackets. By looking at both of these markers, a better analysis of the true income level of each studied area can be made. Figure 2.12 shows the estimated median household income for Maryland, Baltimore County and the southeast area's ZIP codes. This shows a large range of incomes, especially between jurisdictions. Maryland shows the highest estimated median income at $72,419, followed by Baltimore County, which has an estimated $65,411 median household income. When looking at the southeast area, the range of estimated median incomes drops once again, with the highest estimates shown in 21237 at $61,027 followed by 21219 with $59,759, 21220 with $58,533 and 21221 with $50,459. Both 21206 and 21222 have estimated median incomes below $50,000, at $47,472 and $46,421, respectively. This represents a $14,606 spread of estimated median incomes between ZIP codes in the southeast area (CB 2013, MDP 2013a-b).

Figure 2.12									
Estimated Median Household Income (in 2010 Inflation-adjusted Dollars) for 2007-2011 by Jurisdiction and ZIP Code Tabulation Area									
	Maryland	**Baltimore County**	**21206**	**21219**	**21220**	**21221**	**21222**	**21224**	**21237**
Estimated Income	$72,419	$65,411	$47,472	$59,759	$58,533	$50,459	$46,421	$51,508	$61,027
Margin of Error	$371	$752	$3,881	$7,046	$4,151	$1,996	$2,174	$2,708	$4,595
CB 2013, MDP 2013 a-b.									

It is important to note the margin of error and its effect on the estimated median income. While Maryland and Baltimore County have relatively low margins of error ($371 and $752, respectively), the southeast area ZIP codes have relatively high margins of error due to their smaller size. For example, 21219 has a $7,046 margin of error, which could significantly change the ranking of the estimated income; if the margin of error were subtracted from the estimated median income, the ZIP code would be ranked as one of the lowest income communities in the southeast area. Similarly, if the margin of error were added to the estimate, the median income would become the highest income in the southeast area, as well as being higher than that of Baltimore County (CB 2013, MDP 2013a-b).

When further examining income, it is apparent that significant discrepancies exist between the studied areas. Figure 2.13 describes the estimated household income in Maryland, Baltimore County and the southeast area's ZIP codes as an estimated percentage of households living within an income range. Income ranges allow a more in-depth look at a population's assets in respect to other households in the area. In examining these data, it becomes apparent that the southeast area is less affluent than other communities within Baltimore County and Maryland.

Looking at the income range with the largest household representation, there are very large differences between Maryland, Baltimore County and the southeast area ZIP codes. The income range with the highest estimated representation in Maryland is $100,000 to $149,999, at 18.0 percent of the population. Baltimore County is less affluent, with the largest percentage of households (19.5 percent) estimated to have incomes in the $50,000 to $74,999 range. All seven ZIP codes within the southeast area have their largest percentages in this range as well. Unlike Baltimore County, which shows a definitive representation in the $50,000 to $74,999 range, the southeast area ZIP codes show almost as many households in the $35,000 to $49,999 range, such as seen in the 21237 ZIP code, which has 17.3 percent

Figure 2.13

Estimated Household Income (in 2010 Inflation-adjusted Dollars) for 2007-2011 by ZIP Code Tabulation Area

		Maryland	Baltimore County	21206	21219	21220	21221	21222	21224	21237
Under $10,000	Estimated Percent	5.0	4.7	7.4	5.5	3.8	5.0	8.0	7.0	4.5
	% Margin of Error	0.1	0.3	1.6	2.1	1.2	1.0	1.4	1.2	1.4
$10,000 to $14,999	Estimated Percent	3.3	3.6	5.3	6.9	4.4	5.6	5.4	6.2	3.8
	% Margin of Error	0.1	0.2	1.3	2.3	1.4	0.9	0.9	1.5	1.4
$15,000 to $24,999	Estimated Percent	6.8	7.4	9.6	5.6	7.8	9.7	10.9	11.4	9.2
	% Margin of Error	0.1	0.3	1.5	2.2	1.4	1.5	1.2	1.7	1.8
$25,000 to $34,999	Estimated Percent	7.5	8.4	14.8	9.8	10.4	12.9	11.8	10.0	8.4
	% Margin of Error	0.1	0.3	1.8	3.3	1.6	1.7	1.5	1.5	1.5
$35,000 to $49,999	Estimated Percent	11.2	13.3	14.5	11.8	15.2	16.3	17.0	14.1	16.1
	% Margin of Error	0.1	0.3	1.9	2.8	2.4	1.9	1.5	1.7	1.7
$50,000 to $74,999	Estimated Percent	17.7	19.3	22.4	19.5	22.0	19.0	20.8	19.1	17.3
	% Margin of Error	0.2	0.5	2.3	3.7	2.2	2.0	1.7	1.9	2.4
$75,000 to $99,999	Estimated Percent	13.9	14.6	14.0	15.1	14.6	13.7	13.9	11.9	14.5
	% Margin of Error	0.1	0.3	1.9	3.4	2.0	1.6	1.5	1.6	2.4
$100,000 to $149,999	Estimated Percent	18.0	16.4	9.5	17.8	15.1	13.2	9.5	12.4	18.7
	% Margin of Error	0.2	0.4	1.7	4.0	2.0	1.6	1.3	1.3	2.4
$150,000 to $199,999	Estimated Percent	8.3	6.4	1.8	6.5	3.4	3.3	1.6	4.2	4.5
	% Margin of Error	0.1	0.3	0.7	1.9	0.8	1.0	0.5	1.0	1.5
Over $200,000	Estimated Percent	8.1	5.9	0.6	1.6	3.3	1.3	1.1	3.7	3.0
	% Margin of Error	0.1	0.3	0.3	1.0	1.1	0.5	0.4	0.9	0.9

CB 2013, MDP 2013 a-b.

in the $50,000 to $74,999 range and 16.1 percent in the $35,000 to 49,999 range. This pattern is mirrored in all studied ZIP codes and suggests that the southeast area is less well off than Baltimore County, as a significant number of people also live in the lower range of incomes.

When examining the extremes — those whose household incomes are either less than $10,000 or more than $200,000 — a similar pattern is seen, with the southeast area having higher rates of households with extremely low incomes compared to the county or the state. When looking at households with an income of less than $10,000, Maryland shows an estimated 5.0 percent of households in this category, which is similar to Baltimore County's estimate of 4.7 percent. Several neighborhoods in the southeast area show higher percentages of households with incomes of less than $10,000 — only two ZIP code has a lower estimated percentage than Baltimore County, 21220 at 3.8 percent and 21237 at 4.5. All other ZIP codes in the southeast area are either equal to or have a greater percentage than Baltimore County or Maryland. The highest percentage of households estimated below $10,000 income can be seen in 21222 at 8.0 percent, followed by 21206 at 7.4 percent, 21224 at 7.0 percent, 21219 at 5.5 percent and 21237 at 4.5 percent.

The other extreme, those that are well off, have an annual household income of over $200,000. In Maryland, an estimated 8.1 percent of all households have incomes in this range. Baltimore County shows much lower representation in this income range, with an estimated 5.9 percent of households making this amount. The southeast area's ZIP codes show very small representations in this income category: Eastpoint (21224) has the highest representation in the southeast area, with 3.7 percent. This is nearly half the proportion of households seen in Baltimore County as a whole. This is followed by Middle River (21220) with 3.3 percent and Rosedale (21237) with 3.0 percent. The remaining neighborhoods have representations of less than 2.0 percent — 21219 has only 1.6 percent of its households estimated to have income in this upper bracket. ZIP codes 21221 and 21222 have 1.3 and 1.1 percent estimates, respectively. Overlea (21206) has the lowest representation of households in this category, with a mere 0.6 percent having estimated incomes over $200,000 (CB 2013, MDP 2013a-b).

2.4.2. Poverty

Poverty is measured by the pre-tax income of individuals and families, family size, and age of its members. The U.S. Census Bureau aggregates these data and calculates an annual federal measure of poverty, adjusted to changes in the cost of living. These poverty thresholds are adjusted for age and family size (HHS 2012). This report uses the American Community Survey estimates for individuals with income that was below the poverty level in the 12 months preceding their participation in the survey. This estimate includes all people, regardless of their family size. Due to the nature of the survey results, the data are assumed adjusted to the federal poverty level of the year in which the participant answered the survey.

Figure 2.14 shows the estimated percentage of all people whose incomes were below the federal poverty line in the 12 months preceding participation in the survey. These individuals may or may not be part of a family unit. The southeast area's ZIP codes have higher rates of poverty than the county or the state as a whole. In Maryland, the estimated percentage of people living in poverty in the 12 months prior to the survey is 9.0 percent. In Baltimore County, this number is slightly lower, at 8.2 percent. Within the southeast area, the estimated percentage varies widely, with most ZIP codes showing percentages above those of Baltimore County and Maryland. Two ZIP codes — 21220 and 21237 — show estimated percentages below Baltimore County and Maryland, at 7.0 and 7.5 percent, respectively. All other percentage estimates are above both the state and county. These areas include 21219 with 8.8 percent, 21221 with 11.0 percent, 21206 with 13.1 percent and 21222 with 13.4 percent. The highest estimate of poverty in 2007-2011 is seen in the 21224 ZIP code, with 19.2 percent of all residents estimated to be living in poverty within one year of the administration of the survey.

Figure 2.14								
Estimated Percentage of All People whose Income in the Past 12 Months was Below the Poverty Level for 2007-2011 by ZIP Code Tabulation Area								
	Maryland	**Baltimore County**	**21206**	**21219**	**21220**	**21221**	**21222**	**21224**	**21237**
Estimated Percentage	9.0	8.2	13.1	8.8	7.0	11.0	13.4	19.2	7.5
% Margin of Error	0.1	0.4	2.1	2.7	1.7	2.1	1.4	2.7	1.8
Source: CB 2013, MDP 2013 a-b.								

As discussed, poverty has a severe effect on children. To further analyze the poverty level, figure 2.15 examines the estimated percentage of people under 18 years old living in poverty within one year of the administration of the American Community Survey. In all cases, the poverty estimate is higher for minors than the overall population. In Maryland, there is an 11.5 percent poverty estimate for those under 18. This number is lower in Baltimore County, at 9.7 percent, but higher than the county's estimate for all people. In the southeast area, a similar pattern is observed for minors, but the estimates of those living in poverty are much higher. Both 21220 and 21237 show poverty estimates lower than Baltimore County and Maryland, at 8.7 percent and 9.4 percent, respectively. The next highest estimates are seen in 21219 at 14.8 percent, 21221 at 15.9 percent, 21222 at 17.8 percent and 21206 at 19.9 percent. Once again, the highest estimate of poverty was seen in 21224, with 36.2 percent.

Figure 2.15								
Estimated Percentage of People Under 18 Years Old Whose Income in the Past 12 Months was Below the Poverty Level for 2007-2011 by ZIP Code Tabulation Area								
	Maryland	**Baltimore County**	**21206**	**21219**	**21220**	**21221**	**21222**	**21224**	**21237**
Estimated Percentage	11.5	9.7	19.9	14.8	8.7	15.9	17.8	36.2	9.4
% Margin of Error	0.3	0.8	3.8	7.0	3.4	6.4	3.4	6.4	4.4
Source: CB 2013, MDP 2013 a-b.								

2.4.3. Births to Mothers with Less than Twelve Years of Education

Although not obvious, there is a strong correlation between a mother's education level and the health and well-being of her child. This is especially true of women who did not finish high school. Research shows that women with fewer years of education are less likely to receive routine prenatal care. Children born to undereducated mothers are more likely to be underweight or die in infancy (ARHQ 2005).

Births to undereducated mothers are not synonymous with births to teenage mothers, which are analyzed in Chapter Three. In this indicator, all women without 12 years of education are counted — a woman who gives birth at 30 and did not finish her high school education is counted in this category, as well as those women who give birth before having a chance to complete high school. "Undereducated" is also not synonymous with "high-school dropout," which is based on the education system used in the United States. The latter term may not describe some immigrant women counted in this statistic, as educational attainment for these women may not be expected or normal. This is particularly important when considering the growing number of Hispanic immigrants in Baltimore County and the southeast area.

Figure 2.16 shows the number of births to mothers with less than 12 years of education as a percentage of all live births in the three studied areas for 2000-2004 and 2005-2009. In both data sets, the southeast area had more births to undereducated mothers than Maryland and Baltimore County. During the 2005-2009 period, 18.39 percent of all live births were to mothers with fewer than 12 years of education in the southeast area, followed by Maryland with 14.62 percent and Baltimore County with 10.91 percent of all live births. Although the southeast area experienced the highest levels of births to undereducated mothers, it is also the only studied area to experience a decrease in this indicator between 2000-2004 and 2005-2009. The southeast area's percentage of births to mothers with less than 12 years of education declined from 18.56 percent to 18.39 percent. Conversely, Baltimore County's births to undereducated

Figure 2.16

Births to Mothers with Less than 12 Years of Education as a Percentage of all Births by Area: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 201
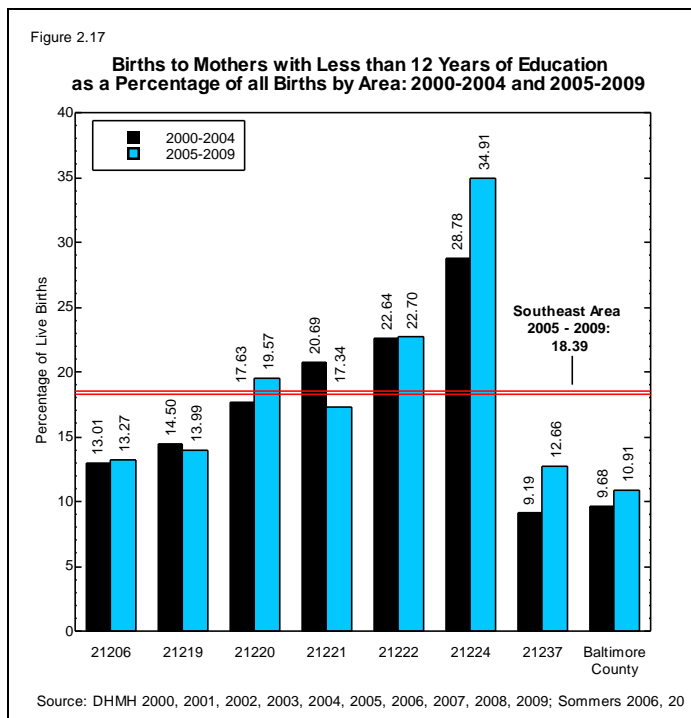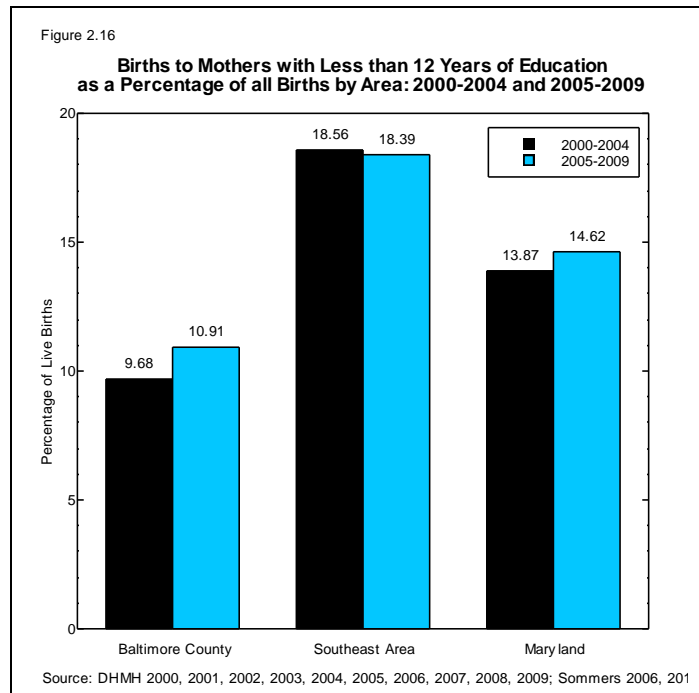
mothers increased between the two studied intervals by 1.23 percentage points, from 9.68 percent to 10.91 percent. A 0.75 percentage point increase was also seen in Maryland — the percent increased from 13.87 percent to 14.62 percent (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

The southeast area varies in the percentage of births to undereducated mothers at the ZIP code level (figure 2.17). Of the seven studied ZIP codes, five experienced increases to this indicator between 2000-2004 and 2005-2009. The largest increase was seen in 21224: the percentage of births to mothers with less than 12 years of education rose from 28.78 percent to 34.91 percent. The next largest increase of 3.47 percent was seen in 21237, which rose from 9.19 percent to 12.66 percent of all live births. ZIP code 21220 showed a small increase in births to undereducated mothers, at 1.94 percentage points, rising from 17.63 percent to 19.57 percent of live

Figure 2.17

Births to Mothers with Less than 12 Years of Education as a Percentage of all Births by Area: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 20

births, followed by 21206 with an increase of 0.26 percentage points, from 13.01 to 13.27 percent of all

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live births. Finally, the smallest increase was seen in 21222 at 0.06 percentage points, from 22.64 percent to 22.70 percent of all live births. Two ZIP codes — 21219 and 21222 — showed decreases in births to mothers with less than 12 years of education. The 21221 neighborhood showed the most progress, with a decrease of 3.35 percentage points, from 20.69 to 17.34 percent of all live births, followed by 21219, with a 0.51 percentage point decrease, from 14.50 percent to 13.99 percent of births to mothers with less than 12 years of education between 2000-2004 and 2005-2009 (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Finally, figure 2.18 gives some historical perspective on births to undereducated mothers, showing trends in Maryland, Baltimore County and the southeast area as a whole from 2000 to 2009. As shown, all three studied areas had a general decrease in births to undereducated mothers from 2000 through 2004 and a general increase from 2005 until 2009, showing a relatively stable rate over time. The largest change over time was seen in Baltimore County, which had an overall increase of 1.12 percent, as compared to the overall number of live births. Baltimore County's percentage of births to undereducated mothers peaked in 2007, at 11.3 percent of all births, and the lowest percentage was seen in 2001, at 9.13 percent of all live births. The southeast area showed the next highest rate of change, with a decrease of 0.72 percent from 2000 to 2009 for births to mothers with less than 12 years of education. It should be noted that the southeast area has the highest percentage of births to undereducated mothers in all areas in all studied years.

Figure 2.18

Births to Mothers with Less than 12 Years of Education as a Percentage of all Live Births by Year: 2000-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 201
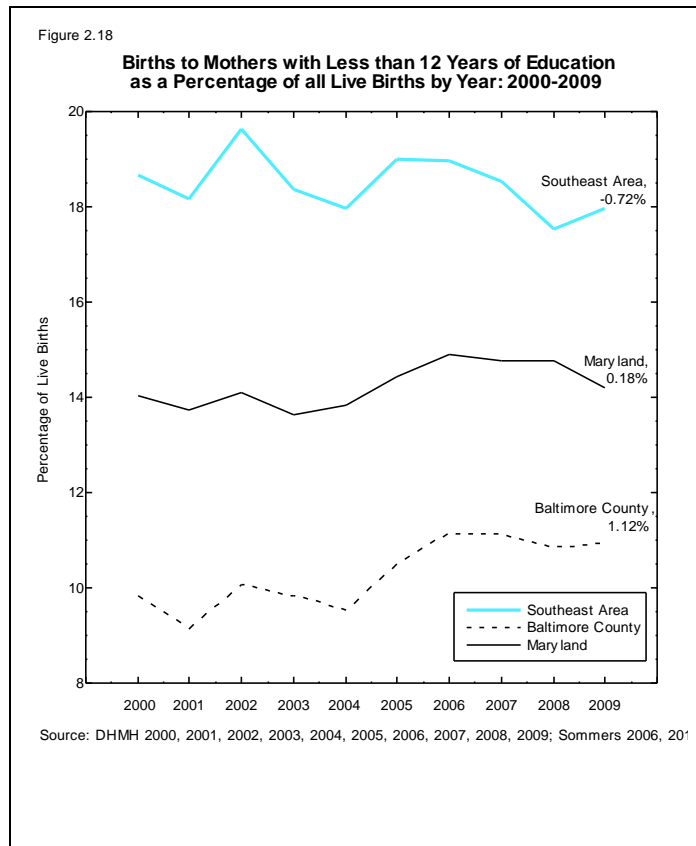
In 2002, the percentage of births to undereducated mothers peaked at 19.64 percent, and the lowest numbers seen in this area were reached in 2008, when the percentage of births to undereducated mothers dropped to 17.54 percent of all live births. Of the three studied areas, Maryland showed the most stable rate over time, with a mere 0.18 percent increase in births to undereducated mothers between 2000 and 2009. The Maryland rate peaked at 14.91 percent of all live births in 2006, and the lowest percentage for this indicator was seen in 2003 at 13.65 percent of all live births (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Chapter Three: Infant and Safety Indicators

3.1 Introduction

Factors of birth, such as low birth weight and births to young mothers also affect the overall quality of life in a community, as these dynamics may create differing support needs for parents. Of the 27 indicators chosen by the task force to study the wellness of the southeast area, five examine infants and child safety. These indicators are divided into two priority areas: infants, and safety and crime (figure 3.1).

Figure 3.1	
Priority Areas and Indicators for Infants and Safety	
Priority Area	**Selected Indicator**
Infants	Infant mortality
	Low birth weights
	Births to Hispanic mothers
	Births to teenage mothers
Safety and crime	Child abuse and neglect

3.2 Infant Indicators

The prenatal and neonatal stages of life have great influence on health and well-being throughout all stages of life. As such, it is important to examine these factors and the impact they have on development and health. While good health and enrichment at the beginning of life can bring a wealth of positive attributes later on, the lack of such can cause adverse consequences later in life, such as chronic health problems, learning difficulty and lack of job skills.

Infant wellness is examined through four indicators: infant mortality, low birth weights, births to Hispanic mothers and births to teenage mothers. These indicators examine not only health of newborns, but also the factors of their birth, which may influence lifetime success.

3.2.1. Infant Mortality

According to the Maryland Vital Statistics Administration, the term "infant mortality" refers to the number of children that die within 1 year of birth per 1,000 total births (DHMH 2011). Infant mortality is not an indicator based solely on the health of the mother, but is indicative of other factors, such as socio-economic conditions, availability of prenatal and neonatal health care and general public health practices in the community in which a child is born.

The national infant mortality rate in 2011 was 6.05 deaths per 1,000 births, which continues the downward trend in infant deaths in the United States. Nationally, the five leading causes of infant deaths in 2011 were: (1) congenital malformations, deformations and chromosomal abnormalities, (2) short gestation and low birth weight, (3) sudden infant death syndrome (SIDS), (4) maternal complications of pregnancy and (5) accidents and unintentional injuries (Hoyert and Xu 2012). Lack of prenatal care is also a key factor in infant mortality. According to the U.S. Centers for Disease Control and Prevention, pregnancy-related health outcomes are heavily influenced by the mother's intake of folic acid, use of alcohol and drugs, weight gain or loss during gestation, tobacco use and physical activity (CDC 2012a).

Figure 3.2

Infant Mortality Rate by Area: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 20

Figure 3.3

Infant Mortality by ZIP Code: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 20
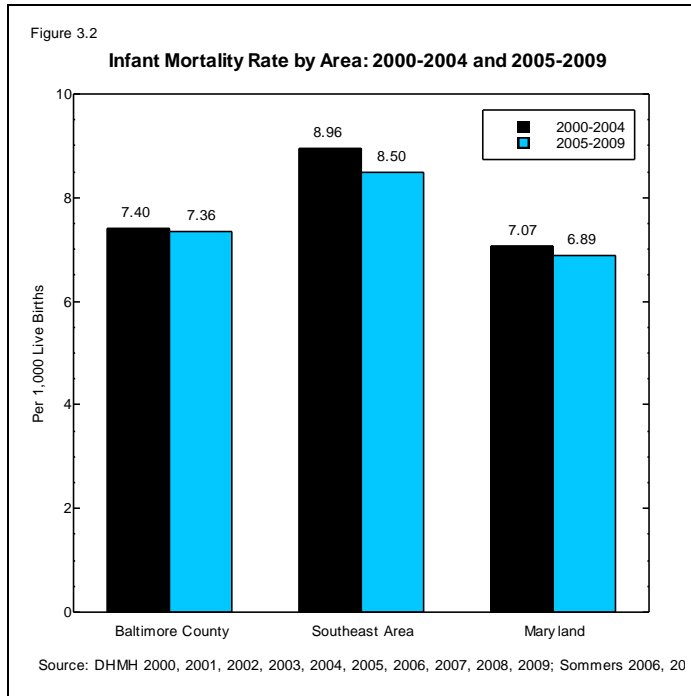
Looking locally, Maryland shows relatively high rates of infant mortality. When comparing five-year aggregate rates, the state as a whole had a rate of 7.07 deaths per 1,000 in the 2000-2004 period and a rate of 6.89 deaths per 1,000 in the 2005-2009 period (figure 3.2). The decline in infant mortality between the two periods mirrors the overall national trend of decreasing infant mortality rates. These falling rates are not as prominent in Baltimore County, which showed a rate of 7.40 deaths per 1,000 in 2000-2004 and a negligible decrease to 7.36 deaths per 1,000 in 2005-2009.

The southeast area as a whole exhibits elevated rates of infant mortality above both Baltimore County and Maryland in the same time periods. In the 2000-2004 period, the southeast area had a rate of 8.96 deaths per 1,000. Although this dropped in the 2005-2009 period, the infant mortality rate was still higher than other indicated areas at 8.50 deaths per 1,000 (figure 3.2).
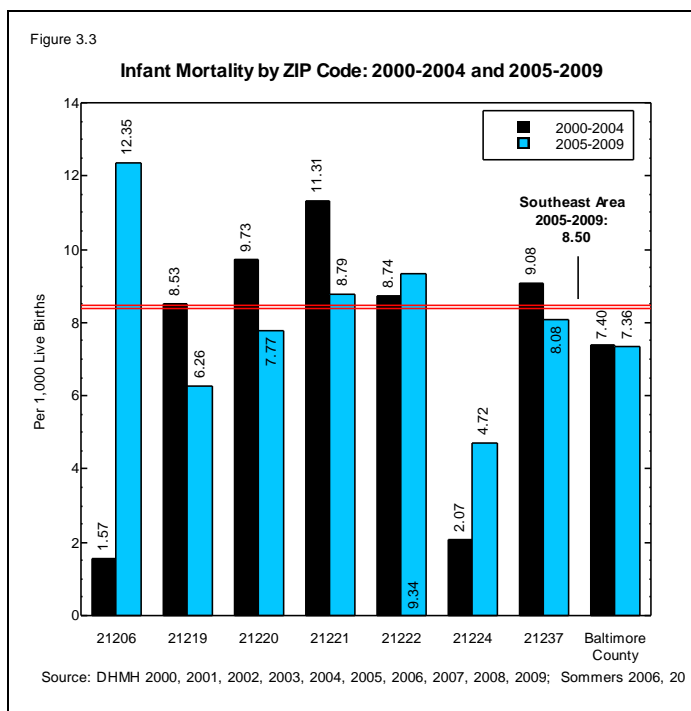
When examining the ZIP codes within the southeast area (figure 3.3), it is apparent that there are some communities within the studied area affected more than others. In the 2000-2004 period, three ZIP codes (21220, 21221 and 21237) had greater infant mortality rates than the southeast area, at 8.96 deaths per 1,000. In 2005-2009, three ZIP codes (21206, 21221 and 21222) were above the southeast area's rate of 8.50 deaths per 1,000 (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Of the seven ZIP codes studied, three experienced increased rates of infant mortality when comparing the 2000-2004 and 2005-2009 ZIP code rates (figure 3.3). The largest rate change seen was in 21206, which increased from a rate of 1.57 deaths per 1,000 to a rate of 12.35 deaths per 1,000. The next largest change can be seen in 21224 where the rate increased from 2.07 deaths per 1,000 to 4.72 deaths per 1,000. ZIP code 21222 experienced the smallest increase in infant mortality over the studied period with a 2000-2004 rate of 8.74 deaths per 1,000, and a 2005-2009 rate of 9.34 deaths per 1,000 (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012). Conversely, four ZIP codes saw

a decrease in infant mortality rates over the studied periods. The largest decrease was seen in 21221, where the infant mortality rate decreased from 11.31 deaths per 1,000 to 8.79 deaths per 1,000. The next largest decrease was seen in 21219, with a drop in mortality rate from 8.53 deaths per 1,000 to 6.26 deaths per 1,000. ZIP code 21220 also showed a decreased rate, changing from 9.73 deaths per 1,000 to 7.77 deaths per 1,000. The smallest decrease in infant mortality by ZIP code was seen in 21237, which experienced a decrease from 9.08 deaths per 1,000 to 8.08 deaths per 1,000.

Looking at annual trends between 2000 and 2009, the southeast area experienced infant mortality trends far above the rates of Maryland and Baltimore County (figure 3.4). Maryland's rate increased the least, by 0.76 percent (from 6.54 to 6.59 deaths per 1,000), followed by the southeast area with a 1.55 percent increase (from 8.23 to 8.36 deaths per 1,000). Baltimore County

Figure 3.4

Infant Mortality Rate by Year: 2000-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 201

has seen the largest increase in infant mortality rate when comparing 2000 and 2009; the rate has increased by 16.56 percent, from 6.09 to 7.30 deaths per 1,000. Despite the southeast area's relative stability when comparing these two years, its infant mortality rate in 2009 was 8.36 deaths per 1,000, which was 1.14 times higher than that of Baltimore County (compared to 7.30 deaths per 1,000) and 1.27 times higher than Maryland (compared to 6.59 deaths per 1,000) (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Not only is the southeast area's infant mortality rate significantly higher than those of Maryland and Baltimore County, it is much more unstable. When looking at the range of values in each of the studied areas in figure 3.4, Maryland's infant mortality rate has been the most stable of the 3 studied areas between 2000 and 2009, with a range of 1.06 between the highest and lowest rate (from 7.60 deaths per 1,000 to 6.54 deaths per 1,000). Baltimore County's infant mortality rate was less stable, with a range of 2.50 between the highest value (8.59 deaths per 1,000) and the lowest value (6.09 deaths per 1,000).The southeast area had the largest spread, at 3.72, with its highest rate being 9.83 deaths per 1,000 and the lowest rate being 6.11 deaths per 1,000. The lowest value seen in the southeast area occurred in 2007, and this was the lowest rate seen in any observed area throughout the studied time period. Similarly, the highest infant mortality rate experienced by any studied area occurred in the southeast area in 2004, with a rate of 9.83 deaths per 1,000 (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).
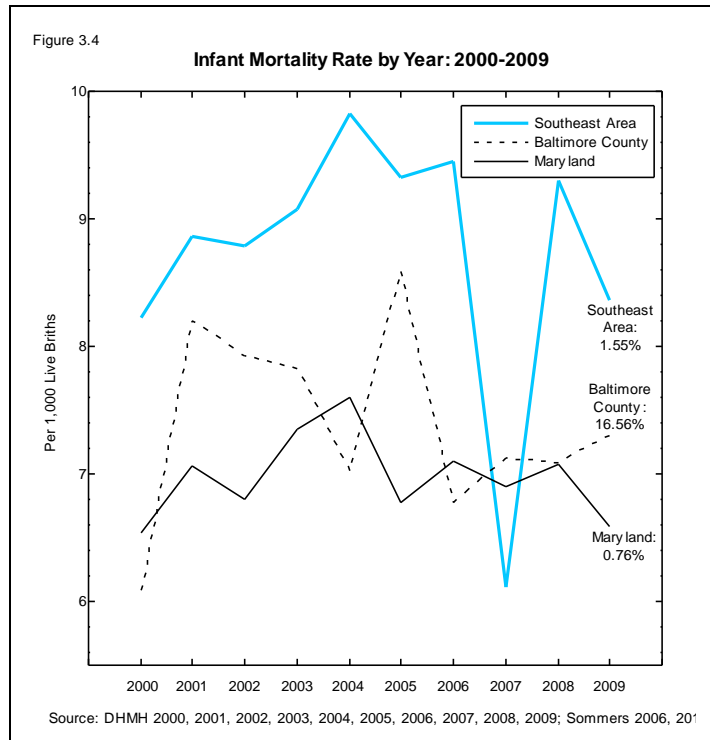
It is important to note that although the infant mortality rate is a good indicator of health in a given area, this rate is also influenced greatly by relatively small changes in population and death rate, especially in smaller cohorts, detailed in appendix B. For example, the change of rate in ZIP code 21206 between 2000-2004 and 2005-2009 was significant: the former rate was 1.57 deaths per 1,000 and the latter 12.35 deaths per 1,000. Although significant, the change can be contributed more to reporting than to a true increase in infant mortality. Between 2000 and 2004, the Vital Statistics Administration reported only one

infant death in 21206, while 11 were reported between 2005 and 2009. In addition to the increase in infant deaths during the latter period, births stayed relatively level when comparing the two periods (638 births in 2000-2004 compared to 648 in 2005-2009). Similarly, the significant decrease in the southeast area rate between 2006 and 2007 from 9.45 to 6.11 can be explained by the same phenomenon. The southeast area infant death rate in 2006 was 26, which dropped to 17 in 2007. At the same time, the birth rate increased from 2,751 in 2006 to 2,782 in 2007 (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012). The simultaneous minor decreases in infant deaths and minor increases in the birth rate for the southeast area lead to major changes in the infant death rate over time. This is not to say that this is not a valid measure of overall health, but significant changes must be viewed within context of overall change over time.

3.2.2. Low Birth Weight

Another indicator chosen by the Task Force is the number of children born with low birth weights (LBW). A low birth weight child is defined as a live birth weighing less than 2,500 grams (5.5 pounds) (DHMH 2011). The LBW rate is the percentage of live births under this weight. Children born weighing less than 2,500 grams have a significantly higher chance of short- and long-term morbidity. Factors such as exposure to lead and pesticides, gestational smoking and alcohol use, and lack of weight gain during pregnancy can lead to children being born underweight. Many socio-economic factors, such as low income and less education are also linked to this indicator (CDC 2012a). It should be noted that the number of low birth weight children includes pre-term births (DHMH 2011), which are more likely to be lower birth weight than births at full-term (CDC 2012a). The national rate of LBW births in 2011 was 8.10 percent, which continues a trend of slowly decreasing rates since 2006, after a significant increase from the 1980s until 2006 (Hamilton, Martin and Ventura 2012).

As shown in figure 3.5, the aggregated LBW rate for 2000-2004 was 8.88 percent in Maryland, 9.06 percent in Baltimore County and 9.71 percent in the southeast area. Compared to these figures, the LBW rates for 2005-2009 decreased in Baltimore County (to 8.91 percent) and the southeast area (to 9.53 percent), but increased to 9.20 percent in Maryland. The change in the Maryland low birth weight rate was the most significant and was the only studied area to experience an increase in this indicator.

Figure 3.5

Infants Born at a Low Birth Weight (<2500g) by Area: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 201:

Figure 3.6

Infants Born at a Low Birth Weight (<2500g) by ZIP Code: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2C

Within the southeast area, LBW rates varied, as shown in figure 3.6. In the 2005-2009 period, four ZIP codes (21206, 21220, 21221 and 21222) were above the southeast area rate of 9.53 percent. This is a decrease from the 2000-2004 period when six ZIP codes (21219, 21220, 21221, 21222, 21224 and 21237) had low birth weight rates above this level. Between 2000-2004 and 2005-2009, 3 ZIP codes showed increases in LBW rate (21206, 21220 and 21221). The most significant increase was seen in 21206, which increased by 2.35 percentage points (from 7.68 percent to 10.03 percent), followed by 21221 with a 0.19 point increase (from 9.80 percent to 9.99 percent) and 21220 with a 0.06 point increase between the two periods (from 9.73 percent to 9.79 percent). The remaining ZIP codes experienced decreases in low birth weight rates, with the most significant change shown in 21219, which decreased from 10.23 percent to 7.10 percent. This decrease was followed by 21224, with a 1.40 point decrease (from 9.73 percent to 8.33 percent), 21237 with a 0.56 decrease (from 9.76 percent to 9.20 percent) and 21222 with a 0.36 decrease, from 9.93 percent to 9.57 percent.

When comparing overall changes between 2000 and 2009 (figure 3.7), the southeast area has had the least change in LBW rate, with an overall change of -1.54 percent percentage points (from 9.71 to 9.56 percent), which also represents the only decrease seen amongst the studied areas. Baltimore County's rate increased by 3.98 percent (from 8.54 to 8.88 percent) and Maryland showed the most change over time with an overall increase of 8.72 percent (from 8.38 to 9.18) (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Although the southeast area showed the least overall change between 2000 and 2009, this area has also been the most volatile when comparing annual figures. The spread of LBW rates in the southeast area was the highest of all studied areas at 1.49 percentage points, with a high of 10.40 percent in 2004 and a low of 8.91 percent in 2007 (figure 3.7). All studied areas experienced a decrease in LBW rates between 2004 and 2007, but not as significant as that seen in the southeast area. The LBW rate decreased between 2007 and 2008 but then increased significantly from 8.91 percent to 9.55 percent.

Maryland's LBW rate trend, in comparison, showed the least annual change with a spread of 0.45 percentage points. There was a general increase in LBW births between 2000 and 2009, with significant increases between 2003 and 2004 (from 8.99 to 9.27 percent) and 2005 and 2006 (from 9.10 to 9.43 percent). Decreases in rate were also seen between 2004 and 2005 (9.27 to 9.10 percent) and 2006 to 2007 (9.43 to 9.04 percent) (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Finally, the LBW rate for Baltimore County showed a fairly stable trend in low birth weights from 2000 to 2009 with a range of 0.81 percent. Although Baltimore County's spread was the median in the three studied areas, there were no significant changes in LBW rate between any two individual years. The trend did show an increase in low birth weight rates between 2000 and 2002 (from 8.54 to 9.35 percent) followed by a period of relative stability between 2002 and 2005, showing only a slight decrease in rates (from 9.35 to 9.26 percent). In 2005, the LBW rate started decreasing until 2007 (from 9.26 to 8.76 percent) and then showed a slight increase until 2009 (from 8.76 to 8.88 percent) (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).
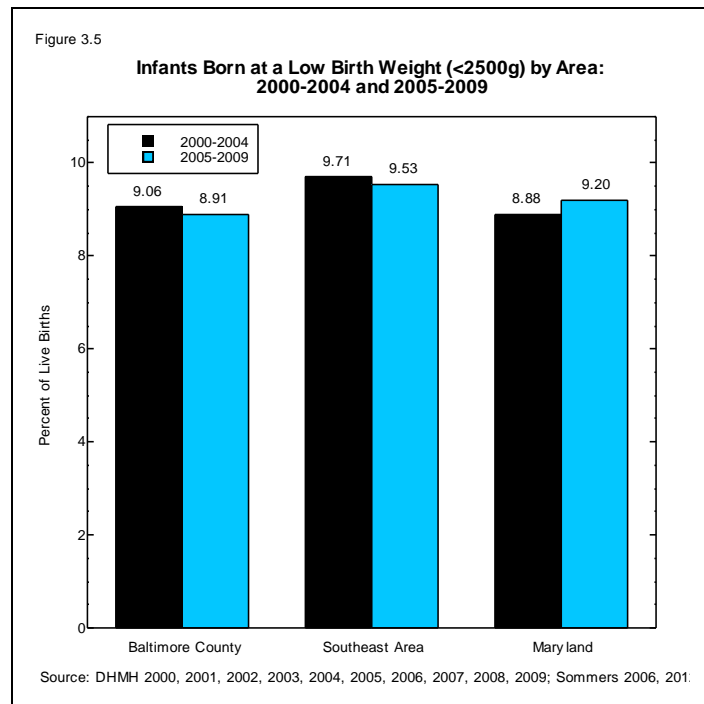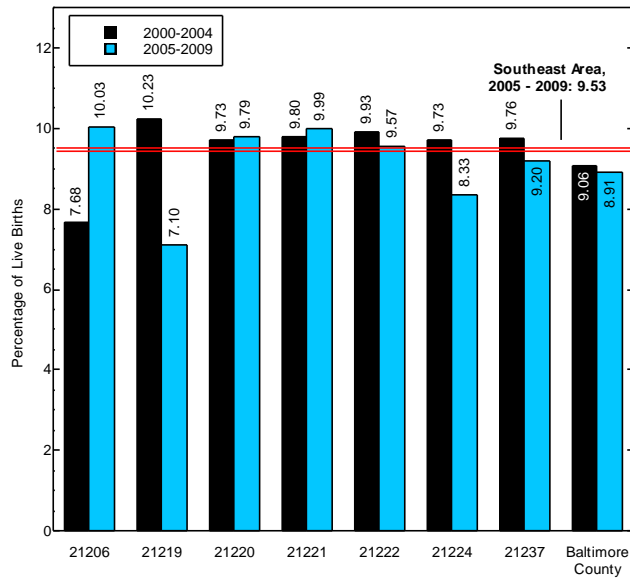
Figure 3.7

Infants Born at a Low Birth Weight (<2500g) by Year: 2000-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 20
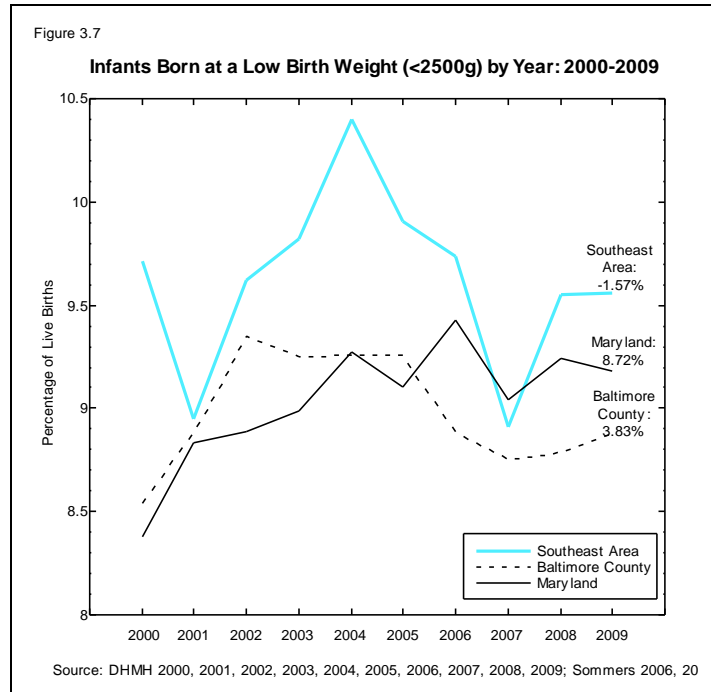
3.2.3. Births to Hispanic Mothers

As discussed in Chapter Two, the Hispanic community is growing rapidly in the southeast area. According to the 2010 census, Hispanics represent 4.88 percent of the southeast area's population and as much as 10.07 percent of the population in certain ZIP codes (MDP n.d. b). As such, the Task Force elected to study births to Hispanic[5] mothers as an indicator of child health, since the needs and challenges of this population are unique.

According to the Maryland Vital Statistics Administration, the birth rate for Hispanic mothers was significantly higher than in other racial or ethnic groups between the studied years of 2002 and 2011. In 2009, for example, the overall birth rate for all ethnicities was 13.2 births per 1,000 population; the Hispanic birth rate was 1.75 times higher at 23.1 births per 1,000 population. Hispanics in Maryland are the least likely demographic group to seek prenatal care, especially early in the pregnancy (DHMH 2011). Babies of mothers who do not seek prenatal care are three times more likely to be born with a low birth weight and five times more likely to die in infancy (OWH 2009).

This increased birth rate impacts the overall needs of the community, as Hispanic children are shown to need more robust early education in order to succeed in their studies (DosRemedios 2009). This has a profound effect on the infrastructure needed at elementary schools in neighborhoods in the southeast area that show high growth rates in Hispanic communities. Similarly, Hispanics in Maryland are shown to have significantly higher rates of adolescent births (DHMH 2011). Births to teenage mothers can negatively affect the life outcomes of both the mother and the child, including health and socio-economic factors, as discussed in section 3.2.4. This also has an effect on the needed infrastructure of an area to support both child and young mother.

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[5] Although "Hispanic" is usually considered an ethnic category, meaning that a person identifying as Hispanic can be of any race, the MDP product used to obtain ZIP code-level data categorized Hispanic as an exclusive racial category.

Looking at the Hispanic birth rate in the studied areas (figure 3.8), Maryland had the highest rate of births to Hispanic mothers in the 2005-2009 period at 12.62 percent, followed by the southeast area at 7.24 percent and Baltimore County at 6.43 percent. Similarly, the largest change in Hispanic birth rate between 2000-2004 and 2005-2009 occurred in the same order: Maryland with a 4.36 percentage point increase, the southeast area with a 4.08 percentage point increase and Baltimore County with a 3.42 percentage point increase.

The birth rate amongst Hispanics in the southeast area mirrors demographic trends in the Hispanic population and follows the same pattern of growth as the general Hispanic population (see Chapter Two). Compared to the 2000-2004 Hispanic birth rates, the 2005-2009 rates have increased in every studied ZIP code. The average Hispanic birth rate is higher in the southeast area than in the rest of Baltimore County: the southeast area rate is 7.23 percent of live births, while the Baltimore County rate is 6.42 percent of live births in the 2005-2009 period.

As seen in figure 3.9, three ZIP codes (21220, 21224 and 21237) had birth rates above the southeast area's rate, with the highest rate seen in 21224 at a rate of 17.77 percent of live births. The next highest Hispanic birth rates were seen in 21237 at 8.71 percent of live births and 21220 at 8.05 percent of live births. Other Hispanic birth rates in the southeast area included, 21221 (6.41 percent of live births), 21222 (5.84 percent of live births) and 21206 (4.94 percent of live births). The lowest birth rate to Hispanic mothers was seen in 21219 at 1.25 percent of live births.

Figure 3.8

Births to Hispanic Mothers by Area: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 20'

Figure 3.9

Births to Hispanic Mothers by ZIP Code: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012

Figure 3.10

Births to Hispanic Mothers by Year: 2000-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 20

Over time, the trends in births to Hispanic mothers have mirrored the trend of increasing Hispanic populations. As seen in figure 3.10, there has been a steady increase in the Hispanic birth rate in all three studied areas since 2000. The largest increase in the birth rate between 2000 and 2009 was seen in Maryland, with a 6.76 point increase in births (from 6.69 percent to 13.45 percent of live births). The southeast area experienced an intermediate increase of births to Hispanic mothers over the indicated time period, with a 5.74 percentage point increase, from 2.40 percent to 8.14 percent of live births. Baltimore County's Hispanic birth rate increased at the slowest rate, representing a 5.09 point increase in births from 2000 to 2009 (from 2.47 percent to 7.56 percent of live births).

Although all studied areas showed overall increases, the southeast area showed periods where the birth rate decreased for Hispanic mothers. Between 2001 and 2002, the southeast area birth rate slowed significantly, only increasing from 3.11 to 3.12 percent of live births. In 2004, the southeast area rate decreased to 2.72 percent of live births. From 2004 to 2007, the birth rate steadily increased, but then saw a decline between 2007 and 2008, decreasing from 8.34 percent to 7.13 percent of live births. The rate then started increasing again, showing an increased birth rate of 8.14 percent of live births in 2009 (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

3.2.4. Births to Teenage Mothers

Teenage births are troubling for any number of reasons, not the least of which being the mental, physical and financial strain placed on mother, child and the supporting community. The financial burden of births to teenage mothers often falls outside the immediate family. In 2008, teenage childbearing in Maryland cost $229 million in public funds (NCPTUP 2011).

The teenage birth rate has been an issue that has held the attention of many in the United States, and perhaps because of the attention this issue has received, the national birth rate to teenage mothers has been in decline over the past two decades. Studies have linked this national trend to pregnancy-prevention messages aimed at teenagers and increased use of contraception (CDC 2012a). Since the teenage birth rate peaked nationally in 1991 at 61.8 births per 1,000 population, the rate has nearly halved — in 2011, the teenage birth rate was 31.3 births per 1,000 population, a record low for the United States (Martin, Hamilton, Ventura, Osterman, Wilson and Mathews 2012).

Since the publication of the last report, the data-collection method for births to teenage mothers in Maryland has changed. Previously, the data for births to teenage mothers were divided into two categories: births to mothers under 15 years of age and births to mothers 15-19 years of age. This information is now pooled, creating a single category of data for births to all mothers under 20 years old. As a result, previously separated material from the 2008 study has been combined here to reflect the new data-collection method.

Figure 3.11

Teen Births by Area: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012
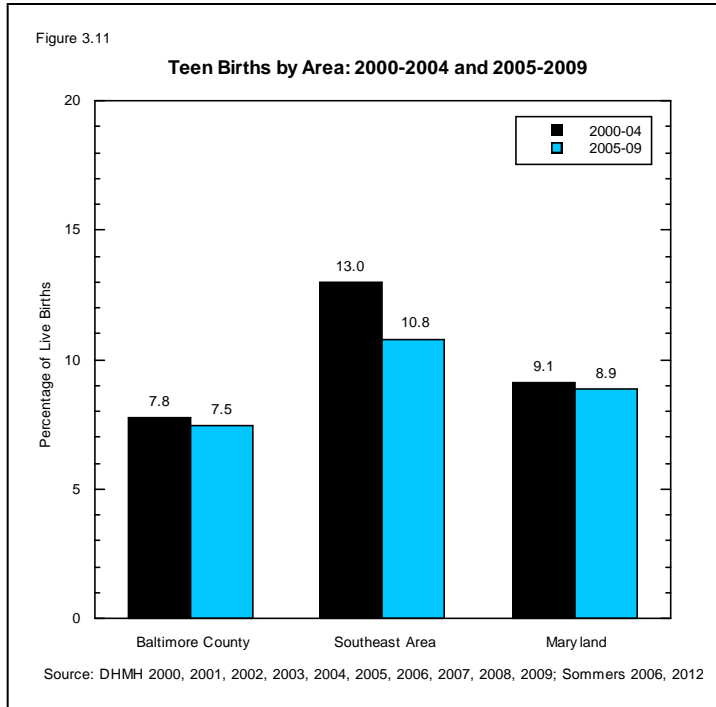
Figure 3.11 shows a comparison of teen birth rates in the studied areas from 2000-2004 and 2005-2009. In the 2005-2009 period, the teen birth rate was highest in the southeast area at 10.8 percent of all live births, followed by Maryland at 8.9 percent of all live births. Baltimore County shows the lowest teenage birth rate at 7.5 percent of all live births. When comparing the 2000-2004 and the 2005-2009 periods, data show that all three observed areas have made at least slight improvements in teenage birth rates: the southeast area showed the greatest improvement with a decrease in teenage birth rate of 2.2 percentage points (from 13.0 percent to 10.8 percent), followed by Baltimore County with a decrease of 0.3 percentage points (from 7.8 percent to 7.5 percent) and Maryland (with a decrease from 9.1 percent to 8.9 percent). Baltimore County is still performing significantly better than Maryland and the southeast area in teenage birth rates as a percentage of live births (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

At the local level, shown in figure 3.12, the seven southeast area ZIP codes demonstrate teenage birth rate changes that are consistent with changes seen in the studied areas. All southeast area ZIP codes experienced declines in teenage birth rates over the observed periods. In the 2005-2009 data set, three ZIP codes (21206, 21221 and 21222) had teenage birth rates higher than the southeast area average of 10.8 percent of all live births. ZIP code 21222 has the highest birth rate at 14.0 percent, with 21221 (12.9 percent) and 21206 (12.0 percent) representing the next highest rates in the southeast area. The four remaining ZIP codes show teenage birth rates lower than the southeast area average percent of live births: 21224 (10.2 percent), 21220 (10.1 percent), 21219 (9.6 percent) and 21237 (6.8 percent). It should be noted that Rosedale (21237) is the only southeast area ZIP code with a teen birth rate lower than that of Baltimore County (7.5 percent), which was previously discussed as having the lowest rate among the three observed areas (DHMH 2000, 2001,

Figure 3.12

Teen Births by ZIP Code: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 201
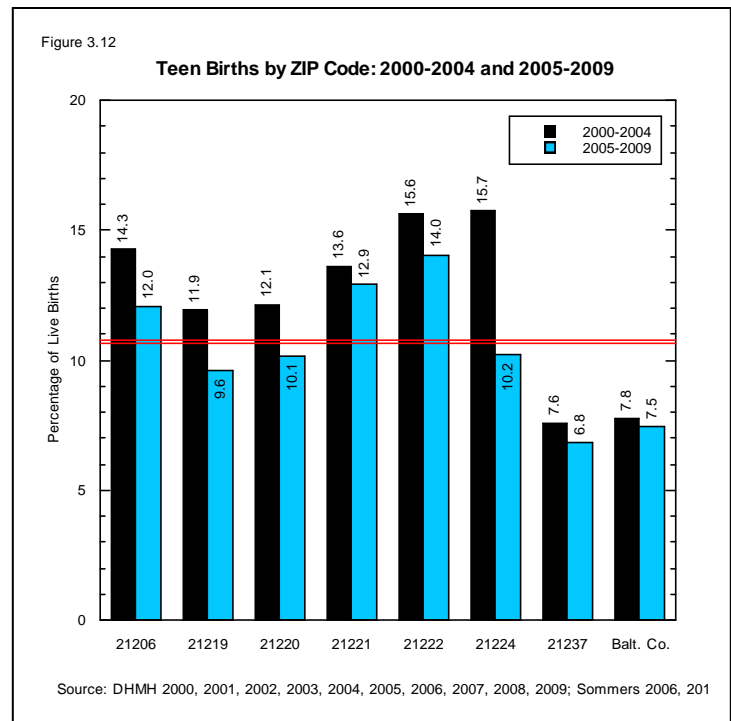
2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

When comparing 2000-2004 and 2005-2009 data in the southeast area, one can see that although all studied ZIP codes have seen a decrease in teenage birth rate, these declines have not been consistent. The greatest decline in teenage births can be observed in the 21224 ZIP code, where the rate dropped by 5.5 percentage points, from 15.7 percent to 10.2 percent of live births. The next largest drops in teenage birth rate can be observed in 21206 and 21219, both with a decrease of 2.3 percentage points; the teen birth rate for 21206 dropped from 14.3 to 12.0 percent, while 21219 dropped from 11.9 to 9.6 percent of live births. ZIP code 21220 followed, with a 2.0 point drop (from 12.1 to 10.1 percent of live births) and ZIP code 21222 with a 1.57 point decrease (from 15.6 to 14.0 percent of live births). The two ZIP codes that showed the least change in teenage birth rate were 21221 and 21237, which saw a decline of 0.7 percentage points (from 13.6 percent to 12.91 percent) and 0.8 percentage points (from 7.60 percent to 6.82 percent), respectively. It should be noted that three ZIP codes — 21206, 21221 and 21222 — have teenage birth rates that remain at 12 percent or higher of all live births. Furthermore, all but one ZIP code (21237) have teenage birth rates higher than the Baltimore County rate of 7.47 percent of all live births (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012). The raw data are shown in appendix C.

Historically, as figure 3.13 shows, there has been little change in the way the three observed areas stack up against each other in teen birth rates. Throughout the observed periods, Baltimore County has consistently maintained the lowest teenage birth rate, even though it has experienced a few years of rate increase over that time. Still, Baltimore County has managed a 15.4 percentage point decrease in teen birth rates over time. The teenage birth rate in Maryland remained firmly between those of Baltimore County and the southeast area through 2009, though the southeast area is closing the gap. From 2000-2009, Maryland experienced an overall 13.8 percentage point decrease in its teenage birth rate. While the southeast area has historically demonstrated a disappointingly high teenage birth rate, it has still shown continual rate declines. During the observed timeframe, the southeast area experienced an impressive overall 27.3 percentage point decrease in its teenage birth rate, although the decline was not as linear as Baltimore County and Maryland rates. This decline percentage for the southeast area is largely due to major declines experienced from 2007 forward. Although the southeast area showed an overall decrease, the teen birth rate spiked between 2002 and 2003 from 12.1 percent to 14.0 percent and again from 11.3 percent in 2006 to 12.0 percent in 2007 (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Figure 3.13

Teen Births by Year: 2000-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 201

37
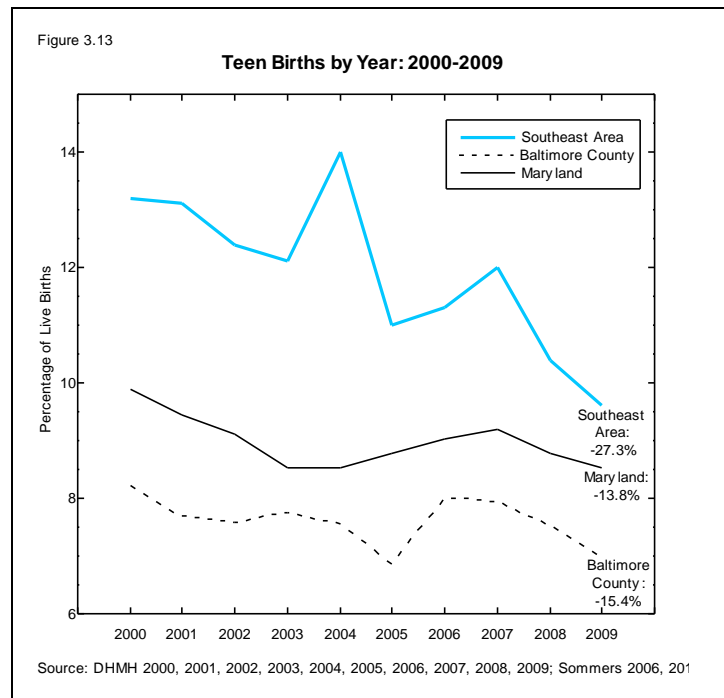
3.3 Safety and Crime: Child Abuse and Neglect

The need for a safe home is of the utmost importance to a child's cognitive and emotional development. For this reason, the Network developed the subcategory of safety under children and youth, which includes the indicator of child abuse and neglect.

Child abuse and neglect are defined as, "at minimum, any recent act or failure to act by a parent or caretaker that results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act which presents imminent risk of serious harm" (HHS 2008). Child abuse and neglect have many short- and long-term effects on all aspects of children's lives, including brain function. Child maltreatment during infancy and early childhood has been linked to problems developing relationships, social and emotional growth and altered cognitive development. These effects, without the proper treatment, can lead to impulsive behavior, increased risk for depression and attention deficit disorders in adolescence (CWIG 2009).

The child abuse and neglect data presented in this report for 2012 represent the state fiscal year, which runs from July 2011 to June 2012, and therefore do not represent the child abuse and neglect data from a regular calendar year. The same is true of the 2005 information, which was collected from July 2004 to June 2005. As in the previous report, the numbers used refer to the "indicated" cases, which consist of "a finding that there is credible evidence, which has not been satisfactorily refuted, that abuse or neglect occurred" (DSD 2012).

A representative of the state Department of Human Resources was able to provide some insight into the child abuse and neglect statistics presented in this report. During state fiscal year 2006, a new database was introduced called "CHESSIE." This new database is mostly computerized, and with the changeover from the state's previous database, Foster Care And Child Tracking System (FACTS), there may have been some loss of data. This new database should have no effect on the SFY 2012 data (CB 2000, DHR 2005, MDP n.d. a-b, Tolson 2012). In addition, though it may not have an effect on the data presented in this report, the State of Maryland enacted a new law as of October 2011, which makes child neglect a criminal act (GOCCP 2011).

Figure 3.14 shows the number of indicated cases of child abuse and neglect in the southeast area, as well as Baltimore County and Maryland as a whole for SFY 2005 and SFY 2012. The rates of child abuse and neglect have risen in Baltimore County and in the southeast area, while the rate has decreased in Maryland between SFY 2005 and SFY 2012. In Baltimore County, from SFY 2005 to SFY 2012, the rate increased from 71.1 per 100,000 population to 86.3 per 100,000 population. This represents an increase of 15.24 "indicated" cases per 100,000 population.

Figure 3.14

Child Abuse and Neglect by Area, SFY 2005 and SFY 2012: Cases with "Indicated"* Findings

* "Indicated" means that there is credible, unrefuted evidence that abuse or neglect occurred.
Note: Child Abuse and Neglect contains data from July 2004/2011- June 2005/2012.
Source: CB 2000, MDHR 2005, MDP n.d.a-b, Tolson 2012.
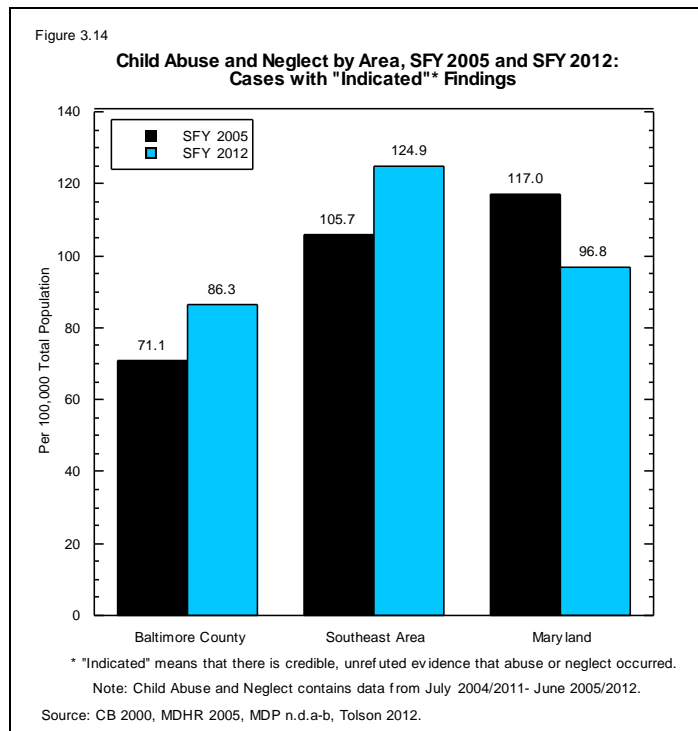
For the same time period in the southeast area, the rate rose from 105.7 per 100,000 population to 124.9 per 100,000 population, which is a significant increase of 19.2 indicated cases per 100,000 population. In the state of Maryland, the rate of child abuse and neglect fell from 116.98 per 100,000 population in SFY 2005 to 96.80 per 100,000 population in SFY 2012, which represents a decline of 20.18 indicated cases per 100,000 population in a period of 6 years (CB 2000, DHR 2005, MDP n.d. a-b, Tolson 2012).

Within the seven ZIP codes of the southeast area, the rate of child abuse and neglect varied, with some ZIP codes experiencing declines and some experiencing increases in indicated cases from SFY 2005 to SFY 2012. These data are shown in figure 3.15. ZIP code 21220 was the only southeast area ZIP code that had a constant child abuse and neglect rate from SFY 2005 to SFY 2012 data (107.15 per 100,000 population). The 21224 ZIP code experienced the highest rate of child abuse and neglect in the southeast area in SFY 2012 (312.14 per 100,000 population), followed by: 21222 (166.87 per 100,000 population), 21221 (125.73 per 100,000 population), 21206 (114.70 per 100,000 population), 21220 (107.15 per 100,000 population), 21237 (47.98 per 100,000 population) and 21219 (31.99 per 100,000 population). The 21219, 21221, 21222 and 21224 ZIP codes had declines in the rates of child abuse and neglect from SFY 2005 to SFY 2012.

Figure 3.15

Child Abuse and Neglect by ZIP, SFY 2005 and SFY 2012: Cases with "Indicated*" Findings

* "Indicated" means that there is credible, unrefuted evidence that abuse or neglect occurred.

Note: Child Abuse and Neglect contains data from July 2004/2011- June 2005/2012.

Source: CB 2000, MDHR 2005, MDP n.d.a-b, Tolson 2012.
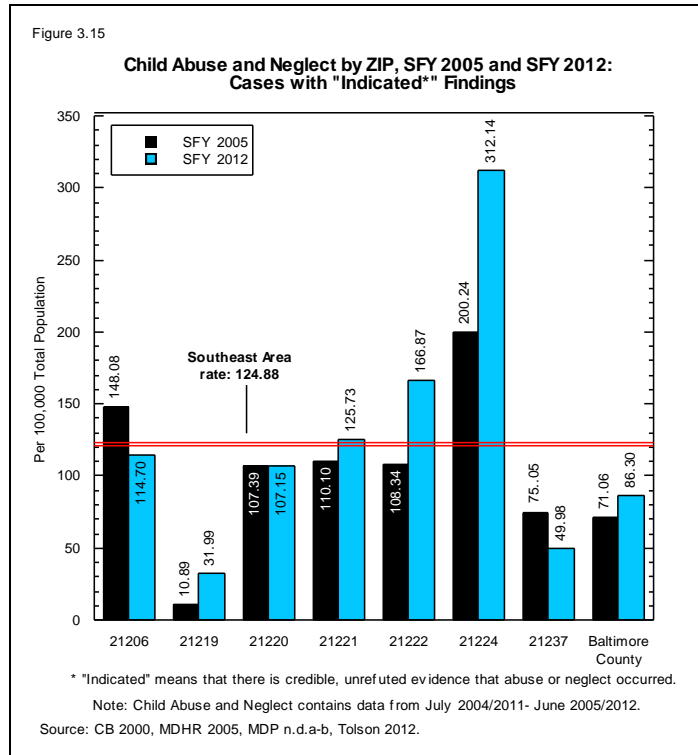
Looking at the change in indicated child-abuse rates from SFY 2005 and SFY 2012 (figure 3.15), the 21224 ZIP had the greatest increase in the southeast area, with an increase of 91.90 indicated cases per 100,000 population (from 220.24 per 100,000 population in SFY 2005 to 312.14 per 100,000 population in SFY 2012), followed by: 21222 with an increase of 58.53 indicated cases per 100,000 population (from 108.34 per 100,000 population to 166.87 per 100,000 population) and 21219 with an increase of 21.10 indicated cases per 100,000 population (10.89 per 100,000 population to 31.99 per 100,000 population) The 21221 ZIP code had the smallest increase at a rate of 15.63 indicated cases per 100,000 population (from 110.10 per 100,000 population to 125.73 per 100,000 population) — which is almost seven times lower than the increase experienced in the 21224 ZIP code. The 21206 ZIP code had the greatest decrease in the rate of child abuse and neglect at 33.38 indicated cases per 100,000 population (from 148.08 per 100,000 population to 114.70 per 100,000 population) followed by the 21237 ZIP code at a rate of 25.07 indicated cases per 100,000 population (from 75.05 per 100,000 population in SFY 2005 to 49.98 per 100,000 population in SFY 2012) and the 21220 ZIP code at the relatively small rate of 0.24 indicated cases per 100,000 population (from 107.39 per 100,000 population in SFY 2005 to 107.15 per 100,000 population in SFY 2012). There were three ZIP codes in which the rate of child abuse and neglect was higher than the rate of the southeast area as a whole in SFY 2012 (124.88 per 100,000 population): 21221(125.73 per 100,000 population), 21222 (166.87 per 100,000 population) and 21224 (312.14 per 100,000 population). The 21206, 21219, 21220 and 21237 ZIP codes (114.70 per 100,000 population, 31.99 per 100,000 population, 107.15 per 100,000 population and 47.98 per 100,000 population,

respectively) had rates of child abuse and neglect that were lower than the average rate in the southeast area for SFY 2012 (CB 2000, DHR 2005, MDP n.d. a-b, Tolson 2012).

One of the factors that may affect the rates of child abuse and neglect is economic depression. This may affect the quality of child care and housing parents can obtain, and may place children in a stressful environment that may lead to more incidents (Ayer 2012). This is reflected in the research, which shows that there are many factors that affect the well-being of a child, which include poverty, environment and safety, and family and social environment. Nationally, the number of children living in poverty increased to 22 percent in 2010 from 16 percent in 2000 and 2001. In 2009, 45 percent of United States households with children had physically inadequate housing, crowded housing, and/or a housing cost burden of more than 30 percent of household income (Wallman 2012). In the southeast area — though there has been a decrease in the rates of reported adult crime and juvenile arrests — the ZIP codes that generally have the highest rates of these crimes (21220, 21221 and 21224) have experienced increases in indicated cases of child abuse and neglect (CB 2000, DHR 2005, MDP n.d. a-b, Tolson 2012).

Chapter Four: Education Indicators

4.1 Introduction

Of the 27 indicators chosen by the Network to study the wellness of the southeast area, six examine education and related factors. These indicators are divided into two priority areas: early education and later education (figure 4.1).

Figure 4.1	
Priority Areas and Indicators for Education	
Priority Area	**Selected Indicator**
Early education	Child-care availability
	Work Sampling System scores (kindergarten readiness)
Later education	Maryland School Assessment scores
	Chronic school absenteeism
	High school leaver rate
	Graduating seniors with plans to attend four-year colleges

This section examines the full scope of public education, from elementary education through high school graduation, as well as the availability of child care and its social and economic implications. By observing key indicators, measures of student and school performance can be made while also gaining some insight on parent involvement and the economic environment.

4.1.1 Changes in Educational Reporting

Since the publication of the previous report, there has been an important change in the reporting of educational data. The Family Educational Rights and Privacy Act (FERPA) regulates the release of student information by elementary, secondary, and post-secondary institutions. In December 2008 and December 2011, FERPA regulations were amended to further protect student privacy by prohibiting the public release of personally identifiable student information without certain prior authorization conditions first being met. Due to these changes, schools are required to suppress data that could reasonably allow a student to be identified. For most data, suppression begins when data points represent less than five or more than 95 percent of the student population being measured (GPO 2013). For some data points used in this report, there are instances of suppression.

In addition, it is important to note that school data are broken down to the school level, as opposed to by ZIP code, as is the case in other parts of this report. The committee chose to use school level data in order to better recognize and target areas for improvement and to ensure that all schools within the southeast area were included. Schools located within the ZIP codes studied in this report were included (Task Force 2012a). However, the use of school level data does not guarantee that all students at an observed school reside within the southeast area. In total, data were collected for 47 schools, including 32 elementary schools, 8 middle schools and 7 high schools. For graphing purposes, the elementary schools used are broken down into four groups, which were based on geography as much as possible. The elementary schools studied are:

Group One: Chesapeake Terrace, Edgemere, Berkshire, Eastwood, Colgate, Red House Run, Shady Spring, McCormick and Elmwood.

Group Two: Oliver Beach, Chase, Seneca, Martin Boulevard, Hawthorne, Victory Villa and Glenmar.

Group Three: Middleborough, Sandalwood, Sussex, Deep Creek, Mars Estates, Middlesex, Essex and Orems.

Group Four: Charlesmont, Battle Grove, Bear Creek, Sandy Plains, Grange, Logan, Dundalk and Norwood.

Group One is comprised of schools from the southeast area ZIP codes with fewer schools — 21206, 21237, 21224 and 21219. With the exception of those in ZIP code 21219, the schools of Group One are in contiguous ZIP codes. Group Two schools are in ZIP code 21220, and Group Three and Group Four schools are in ZIP codes 21221 and 21222, respectively.

The middle and high schools studied are also arranged by geographical location, though the smaller number of schools allows for all middle and high schools to be reviewed in a single graph. The middle schools included are: Sparrows Point, Dundalk, General John Stricker, Holabird, Deep Creek, Stemmers Run, Middle River and Golden Ring. The high schools studied are: Patapsco, Dundalk, Kenwood, Eastern Technical, Chesapeake, Sparrows Point and Overlea. Southeastern Technical/Soller's Point High School (a regional magnet school) also falls within the geographic area being studied, but it was excluded from this study due to the fact that it is not a home school for any students and no data are gathered.

4.2 Early Education Indicators

The success of early education is examined through two indicators: child-care availability and kindergarten Work Sampling Scores (WSS). These two indicators work in tandem to assess both the direct and indirect effects of early education on children and their communities.

4.2.1 Child-care Availability

Child care in Maryland is regulated by the Maryland State Department of Education (MSDE). The Department of Education works closely with Maryland Child Care Resource Network (MCCRN), which monitors the quality, availability and cost of child care in the state and consists of 12 regional child-care resource and referral centers (MFN 2013). The regional child-care resource and referral center for Baltimore County is Child Care Links. According to the MCCRN, "child care" is defined as "the care or supervision of a child when the child's parent has given the child's care over to another for some portion of a 24-hour-day as a supplement to the parent's primary care of the child" (MCCRN 2012a).

The administration of child care in Maryland is divided into several types, including before- and after-school programs, part-day child care, and group programs. This report will focus on the two most common types of licensed child care: 8-12-hour centers and family centers. Eight-12 hour centers are full-day child-care centers, where children are under care for most of the day (typically between 8 and 12 hours). Family centers are small child-care centers, run from a proprietor's home, which can care for up to eight children (MCCRN 2012a).

According to the U.S. Bureau of Labor Statistics, 70.6 percent of all women with children under the age of 18 were employed in 2011. Mothers with children under six years old had a 63.9 percent employment rate. The number of married-couple families with both spouses employed in 2011 was 58.5 percent nationally (BLS 2012a). The increasing levels of participation in the work force by mothers and the increasing number of dual-income families make the need for child care apparent. Figure 4.2 shows the number of children under five years of age in each of the southeast area ZIP codes (MDP n.d. b). This age

Figure 4.2			
Population of Children Under Age Five by ZIP Code in the Southeast Area of Baltimore County, 2010			
Area	Total Population	Population < 5 Years	Percentage of Population
21206	10,462	637	6.09%
21219	9,379	460	7.90%
21220	39,199	2,767	7.06%
21221	42,154	2,953	7.01%
21222	53,934	3,469	6.43%
21224	8,650	558	6.45%
21237	30,012	2,037	6.79%
Southeast Area Total	193,790	12,881	6.65%
Source: MDP n.d. b.			

group accounts for a significant percentage of the overall population. While not all children in this age group need child care, the potential demand for these services is very high.

Other than employment, many factors contribute to the accessibility of child care for a family. Child care is costly: in Baltimore County, the average annual cost of licensed child-care services is $18,332, which was approximately 24.3 percent of a family's average income in 2011. This is ranked as the second largest major household expense a family incurs (MCCRN 2012b).[6] Statewide, the average weekly cost for child care for a child under 5 years old is $162.34 for family child-care centers and $213.04 for care in an 8-12 hour center (MCCRN 2012a). This figure is comparable in Baltimore County — the average costs for family child-care programs are $160.85 and $212.45 for child-care center attendance per week, respectively (MCCRN 2012b). Cost was the primary reason that parents could not find child care in Maryland, and the second most important factor considered by families who did find care, in 2011 (MCCRN 2012a).

Proximity and availability of care are other important factors when considering child-care feasibility. Due to strict regulations on the number of children that can attend each center, there are a limited number of child-care slots at each facility, making proximity to child-care facilities a major concern for those who attempt to access services (MCCRN 2012a). When examining the availability of child care in the southeast area and beyond, the need for services becomes more obvious. Figure 4.3 shows the availability of child care in family centers and 8-12 hour centers in 2011 per 1,000 children under five years old. The southeast area has the lowest

Figure 4.3

Child Care Slot Availability by ZIP Code, 2011:
Spaces in 8-12-Hour and Family Child Care Centers in the Southeast Area

Source: CB 2012a-b; Griffith 2012; MCCRN 2012a-b.

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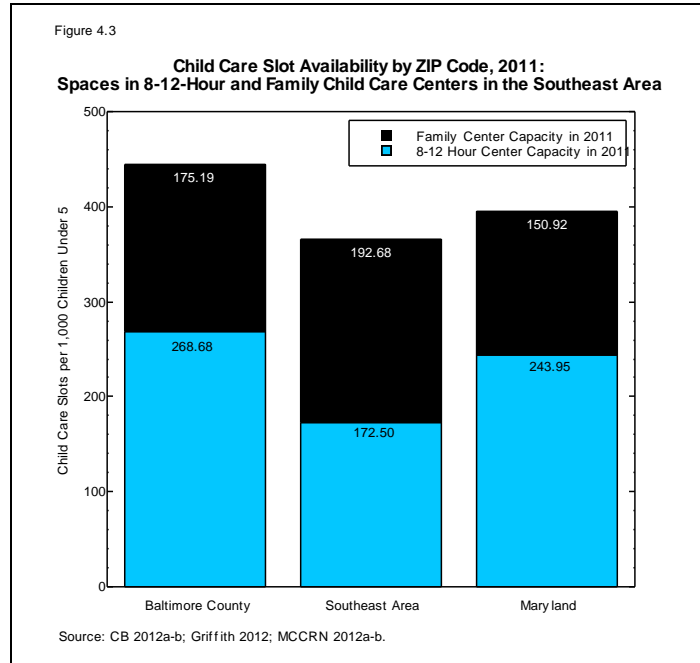
[6] The MCCRN estimates these data based on a family of four with one infant and one child 3-5 years old.

proportion of slots available — there are 365.18 slots per 1,000 children under five years old in total, with 192.68 slots designated for family care centers and 172.50 for 8-12 hour centers. Maryland as a whole has the next highest slot count, with 394.87 slots per 1,000 children under five years old in total (150.92 slots for family

centers and 243.95 slots for 8-12 hour centers). Baltimore County has the most slots of the three studied areas, with 441.20 slots per 1,000 children under five years old, with 175.19 slots in family care centers and 268.68 slots in 8-12 hour centers per 1,000 children under five years old (CB 2012a-b; Griffith 2012; MCCRN 2012a-b).

When looking at overall child care availability in the southeast area by ZIP code, the data show inequalities in services, both for 8-12 hour centers and family care centers (figure 4.4). Three ZIP codes have more slots per 1,000 children under five years old than average: ZIP code 21237 has 429.55 slots available (140.40 family care and 289.15 8-12 hour center slots per 1,000 children under five years old), followed by 21220 with 414.16 slots (191.54 family care and 222.62 8-12 hour center slots per 1,000 children under five years old) and 21206 with 373.62 slots (313.97 family care and 59.65 8-12 hour center slots per 1,000 children under five years old). The four remaining ZIP codes have child-care availability below the southeast area figure of 365.18 slots per 1,000 children under five years old. ZIP code 21224 has the least child-care availability, with 161.29 slots (82.44
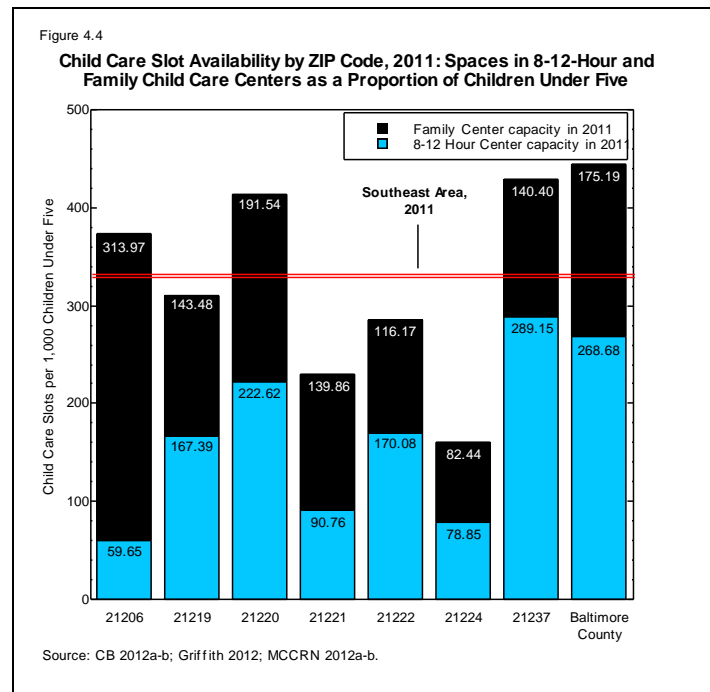
Figure 4.4
Child Care Slot Availability by ZIP Code, 2011: Spaces in 8-12-Hour and Family Child Care Centers as a Proportion of Children Under Five

Source: CB 2012a-b; Griffith 2012; MCCRN 2012a-b.

family center and 78.85 8-12 hour slots per 1,000 children under five years old), followed by 21221 with 230.62 slots (139.86 family care and 90.76 8-12 hour center slots per 1,000 children under five years old), 21222 with 286.25 slots (116.17 family care and 170.08 8-12 hour center slots per 1,000 children under five years old) and 21219 with 310.87 slots (143.48 family care and 167.39 8-12 hour center slots per 1,000 children under five years old) (CB 2012a-b; Griffith 2012; MCCRN 2012a-b). It should be noted that all ZIP codes have child-care availability proportions lower than that of Baltimore County, with 441.12 total slots per 1,000 children under five years old. It should also be noted that there is nothing to prevent parents or guardians from seeking child care in a ZIP code aside from the one in which they reside.

4.2.1.1 8-12 Hour Centers

Child care in 8-12 hour centers is the most used type of child care studied in this report. These centers are large facilities that care for many children at one time. In Maryland, the average number of children attending each center is 63.89. The average is similar in Baltimore County at 56.60 (MCCRN 2012a-b). While these facilities are able to care for a larger number of children, there are fewer 8-12 hour centers than family centers overall, which may limit availability and accessibility of these programs.

When looking at the growth of child-care between 2006 and 2011 for 8-12 hour centers (figure 4.5), both the southeast area and Baltimore County experienced small increases in available slots per 1,000 children under five years old. Baltimore County showed the largest change with an increase in slots from 244.50 to 268.68 per 1,000 children under 5 years old. The southeast area also showed an increase in slots with an increase from 153.06 to 172.50 slots per 1,000 children under 5 years old. There was a small decrease in the proportion of slots in Maryland, from 251.10 to 243.95 slots per 1,000 children under 5 years old (CB 2012a-b; Griffith 2012; MCCRN 2012a-b).

Figure 4.5

Child Care Slot Availability by Area, 2006 and 2011: Spaces in 8-12 Hour Centers as a Proportion of Children Under Five

Source: CB 2012a-b; Griffith 2012; MCCRN 2012a-b.
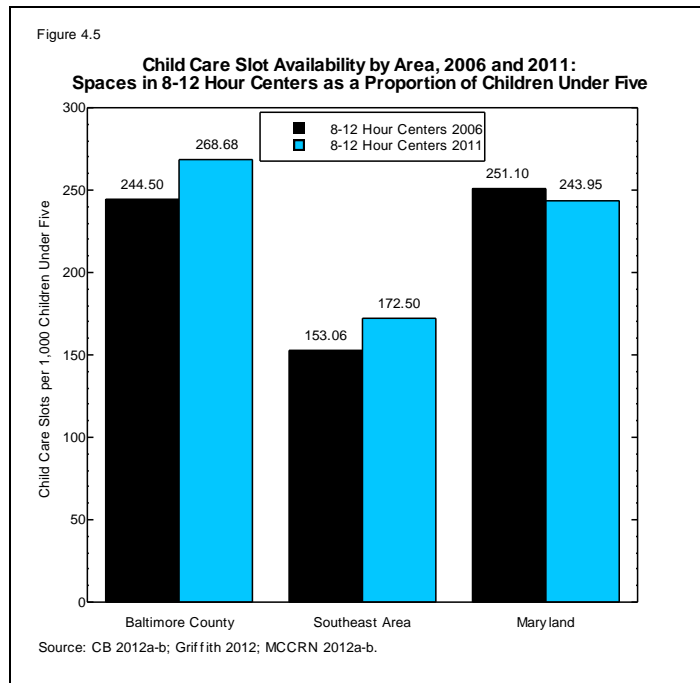
Although the southeast area as a whole experienced an increase in the number of slots available in 8-12 hour centers, this trend is not echoed in all parts of the community. Figure 4.6 explores 8-12 hour center availability by ZIP code. In most ZIP codes, the proportion of slots has increased since 2006. The largest increase has been in 21224: there were no 8-12 hour center slots in 2006, which increased to 78.85 slots per 1,000 children under 5 years old in 2011 (CB 2012 a-b; Griffith 2012; MCCRN 2012a-b). This is due to the establishment of an 8-12 hour center in 21224 in 2011 (Griffith 2012). The next largest increases were seen in 21219, with an increase of 79.89 slots (from 87.50 to 167.39 slots per 1,000 children) and 21220, which increased by 58.12 slots (from 164.5 to 222.62 slots). ZIP codes 21206 and 21237 also saw increases of 36.85 (from 22.80 to 59.65) and 24.65 (from 264.50 to 289.15 slots), respectively. Conversely, two ZIP codes saw decreases in the proportion of
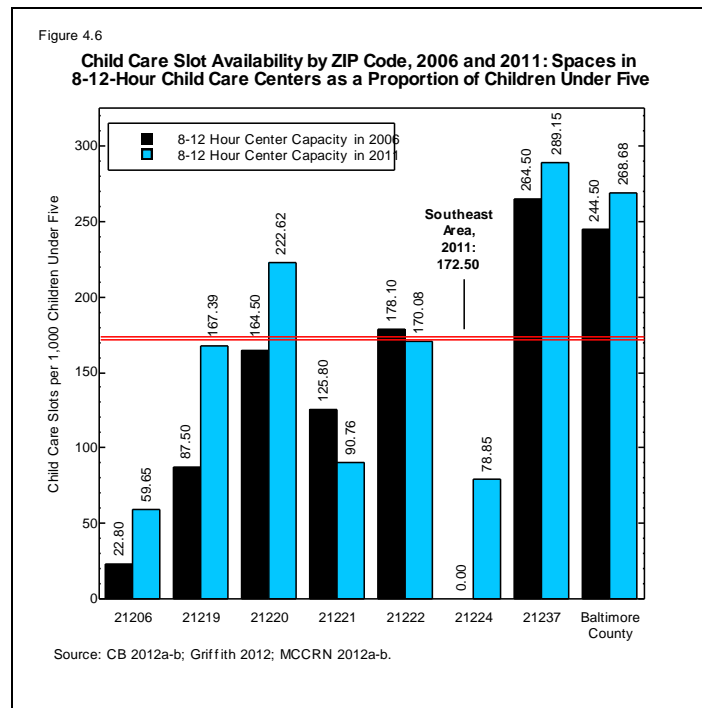
Figure 4.6

Child Care Slot Availability by ZIP Code, 2006 and 2011: Spaces in 8-12-Hour Child Care Centers as a Proportion of Children Under Five

Source: CB 2012a-b; Griffith 2012; MCCRN 2012a-b.

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8-12 hour center slots available. ZIP code 21221 saw a decrease of 35.04 slots per 1,000 children (from 125.80 to 90.76) and 21222 saw a decrease of 8.02 slots per 1,000 children (from 178. 10 to 170.08) (CB 2012a-b; Griffith 2012; MCCRN 2012a-b).

4.2.1.2 Family Care Centers

Unlike 8-12 hour centers, family care centers are small centers within a proprietor's home. MSDE regulations allow up to eight children to be cared for in a family care center at one time (MCCRN 2012a), with a maximum of two children under two years of age (Rauskolb 2012). While there are many more family care centers compared to 8-12 hour centers (the southeast area has 54 8-12 hour centers and 314 family care centers), the limited number of slots per center also can contribute to the lack of child-care availability (Griffith 2012).

Family care centers were a growing source of child care in the southeast area between 2006 and 2011, despite decreases seen in both Maryland and Baltimore County during that time (figure 4.7). Maryland showed the largest decrease of 47.38 slots per 1,000 children under 5 years old, from 198.30 to 150.92 slots per 1,000 children under 5 years old. This was followed by Baltimore County with a decrease of 28.41 slots between 2006 and 2011, from 203.60 to 175.19 slots per 1,000 children. Figure 4.7 also shows an increase of 25.08 slots between 2006 and 2011 for the southeast area, from 167.60 to 192.68 slots per 1,000 children under 5 years old (CB 2012a-b; Griffith 2012; MCCRN 2012a-b). The increase in family care centers in the southeast area is beneficial, considering the decrease in 8-12 hour centers seen over the same time period.

Figure 4.8 compares ZIP code level data for family care availability in the southeast area available in 2006 and 2011, as a proportion of slots per 1,000 children under 5 years old. Of the seven ZIP codes studied, three experienced an increase in family care centers between 2006 and 2011. Of these three areas, two — Overlea (21206) and Middle River (21220) — have proportions

Figure 4.7

Child Care Slot Availability by Area, 2006 and 2011: Spaces in Family Child Care Centers as a Proportion of Children Under Five

Source: CB 2012a-b; Griffith 2012; MCCRN 2012a-b.

Figure 4.8

Child Care Slot Availability by ZIP Code, 2006 and 2011: Spaces in Family Centers as a Proportion of Children Under Five

Source: CB 2012a-b; Griffith 2012; MCCRN 2012a-b.

above the southeast area average. In Overlea, there was an increase of 36.07 slots per 1,000 children under five, from 227.90 to 313.97 slots per 1,000 children and Middle River saw an increase of 15.04,
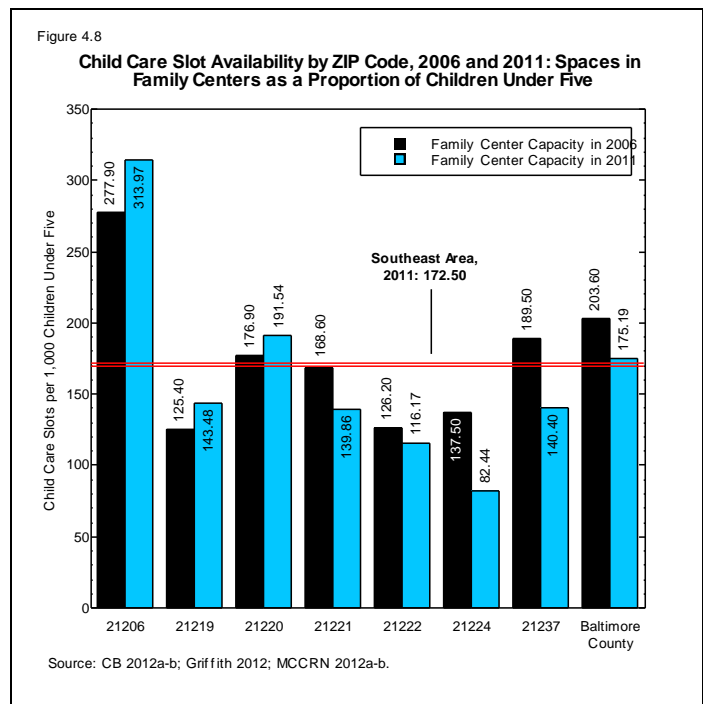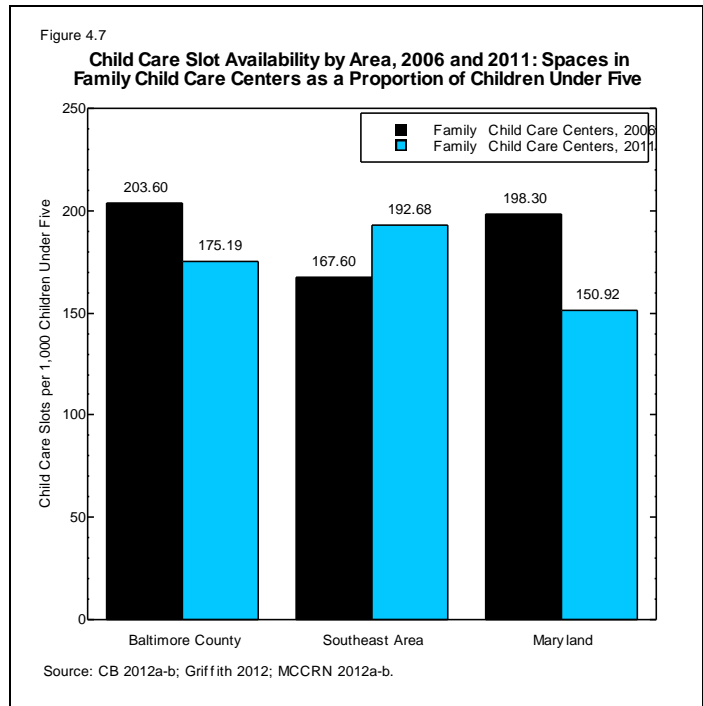
from 176.90 to 191.94 slots. While Sparrows Point (21219) saw an 18.08 increase in slots from 125.40 to 143.48 slots per 1,000 children under 5 years old, the 2011 proportion of slots for this ZIP code was below the southeast area's average of 172.50 slots.

The remaining four neighborhoods — Essex (21221), Dundalk (21222), Eastpoint (21224) and Rosedale (21237) — showed decreases in the capacity of family centers between 2006 and 2011 (figure 4.8). The largest decrease was seen in Eastpoint, which had a decreased capacity of 55.06 slots, from 137.50 to 82.44 slots per 1,000 children under 5 years old. The next largest decrease of 49.10 slots per 1,000 children under 5 years old was seen in Rosedale, which decreased from 189.50 to 140.40 slots per 1,000 children under 5 years old. Decreases were seen in Essex and Dundalk as well, with decreases of 28.74 (from 168.60 to 139.86) and 10.03 (from 126.20 to 116.17) slots, respectively (CB 2012a-b; Griffith 2012; MCCRN 2012a-b).

4.2.2 Work Sampling System Scores

In 2001, Maryland implemented the Maryland Model for School Readiness (MMSR) in order to determine the knowledge and learning abilities of kindergarteners. Since that time, the MMSR has been given every year to all Maryland kindergarteners. Unlike the standardized tests that students take in later education, the MMSR tests students over the first 2 months of the school year using 30 Work Sampling System (WSS) indicators (MSDE 2009). WSS indicators fall under the seven domains of: social and personal development, language and literacy, mathematical thinking, scientific thinking, social studies, the arts, and physical development and health. Kindergarteners receive scores in the seven domains of "full readiness," "approaching readiness" or "developing readiness," and the scores in the seven domains are then compiled to give each student a composite readiness score. "Full readiness" means that a student most often displays that he or she has the skills, abilities, and behaviors necessary to learn in a kindergarten environment, while "approaching readiness" and "developing readiness" mean that a student either inconsistently demonstrates or does not demonstrate these same necessities for kindergarten learning (JHU and MSDE 2010:11).

Maryland school officials recognize the importance of students' being prepared to start their education. By 2009, the state administered all early education programs, had full day kindergarten classes, and made preschool available for disadvantaged children. In December 2011, Maryland was awarded one of the U.S. Department of Education's Race to the Top Early Learning Challenge (RTT-ELC) grants for nearly $50 million. The goal of this grant is for 92 percent of Maryland kindergarteners to be assessed as "fully ready" to enter kindergarten on the MMSR by 2015. The state plans to achieve this goal by targeting

Figure 4.9

Kindergarten Readiness by Area, SY 2005-2006 and SY 2010-2011

* This percentage cannot be calculated due to school data being reported by percentages.

Source: MSDE 2006a, 2011b.

traditionally low-performing populations, such as those with disabilities, those whose first language is not English, those from low-income households, and those who attend informal daycare (MSDE 2011a).
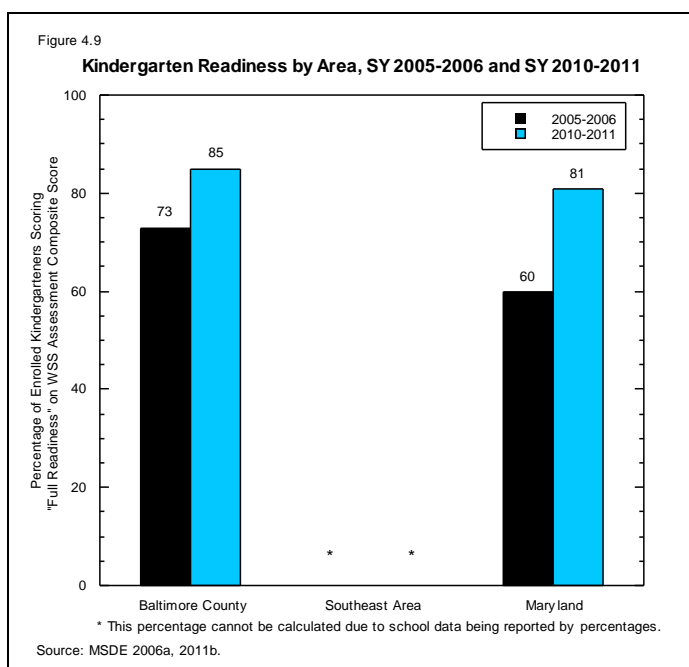
Figure 4.9 displays the percentages of kindergarteners that received a WSS composite score of "full readiness" in school year (SY) 2005-2006 and SY 2010-2011 by area. Only rounded data are available for the southeast area and therefore an accurate percentage for the southeast area using individual school scores cannot be tabulated. Between the two studied periods, Baltimore County and Maryland both demonstrated WSS "full readiness" percentage increases. "Full readiness" in Baltimore County increased from 73 percent in SY 2005-2006 to 85 percent in SY 2010-2011, for a 12-percentage point increase. During both observed school years, Baltimore County had a higher "full readiness" percentage than the state. In Maryland, "full readiness" increased more than 20 percentage points between the observed years, from 60 percent in SY 2005-2006 to 81 percent in SY 2010-2011. In order to reach the 92 percent "full readiness" goal of the RTT-ELC grant, Baltimore County must improve by seven points and Maryland by 11 points before 2015 (MSDE 2006a, 2011b).

Figure 4.10

Kindergarten Readiness by School
SY 2005-2006 and SY 2010-2011: Group 1

Source: MSDE 2006a, 2011b.
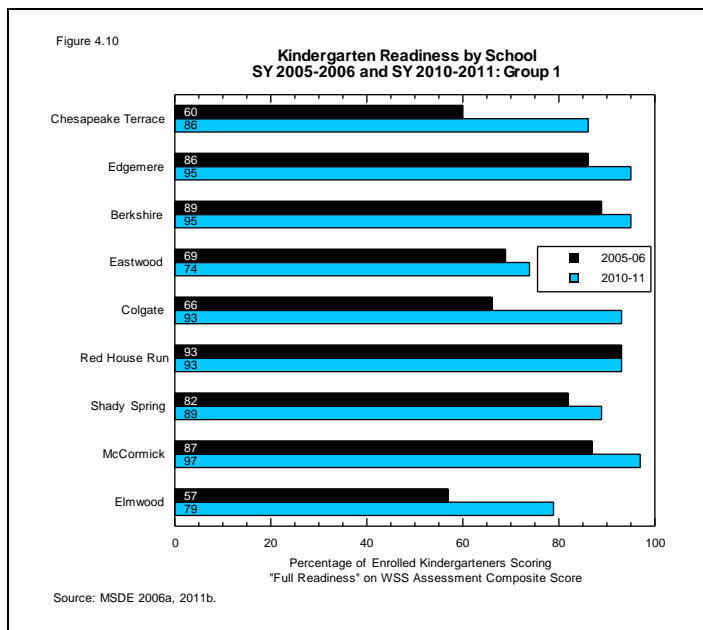
At the school level, the southeast area displays an array of "full readiness" percentages. Figure 4.10, Group One, shows the "full readiness" percentages of nine southeast area schools for SY 2005-2006 and SY 2010-2011. In SY 2010-2011, eight schools showed improvement from their previous "full readiness" percentages: Chesapeake Terrace (60 to 86 percent); Edgemere (86 to 95 percent); Berkshire (89 to 95 percent); Eastwood (69 to 74 percent); Colgate (66 to 93 percent); Shady Spring (82 to 89 percent); McCormick (87 to 97 percent); and Elmwood (57 to 79 percent). Red House Run maintained its "full readiness" percentage at 93 percent. Four schools — Chesapeake Terrace, Colgate, McCormick and Elmwood — had double-digit "full readiness"

improvements from SY 2005-2006 to SY 2010-2011. Eastwood and Elmwood had "full readiness" percentages that remained below 80 percent in SY 2010-2011, while Edgemere, Berkshire, Colgate, Red House Run and McCormick all exceeded the 92 percent "full readiness" target in the same school year (MSDE 2006a, 2011b). Elmwood, the other low-performer, has a significant percentage of students who speak English as a second language, a population that traditionally scores lower on tests due to language barriers (BCPS 2012a).

Figure 4.11, Group Two, shows the "full readiness" percentages of seven southeast area schools from SY 2005-2006 and SY 2010-2011. Four schools experienced double digit improvements in "full readiness" from one year to the next: Oliver Beach (63 to 86 percent); Chase (38 to 80 percent); Seneca (76 to 88 percent) and Martin Boulevard (76 to 96 percent) (MSDE 2006a, 2011b). "Full readiness" at Glenmar also improved from 87 percent in SY 2005-2006 to 96 percent in SY 2010-2011. Martin Boulevard and Glenmar, both at 96 percent "full readiness" in SY 2010-2011, surpassed the RTT-ELC grant goal.

Not all southeast area schools had improved "full readiness" percentages from SY 2005-2006 to SY 2010-2011, though. Hawthorne and Victory Villa each saw percentage declines in "full readiness" since SY 2005-06 data (figure 4.11). Hawthorne, which had a "full readiness" decline from 85 percent in SY 2005-2006 to 75 percent in SY 2010-2011, has some unique challenges (MSDE 2006a, 2011b). Since SY 2006-2007, students that attend Deep Creek for grades 1 through 5 have attended Hawthorne for kindergarten. This caused the number of kindergarteners enrolled at Hawthorne in SY 2010-11 to be more than double the number of students in any other grade at the school (BCPS 2012b). Students at

Figure 4.11

Kindergarten Readiness by School SY 2005-2006 and SY 2010-2011: Group 2

Source: MSDE 2006a, 2011b.
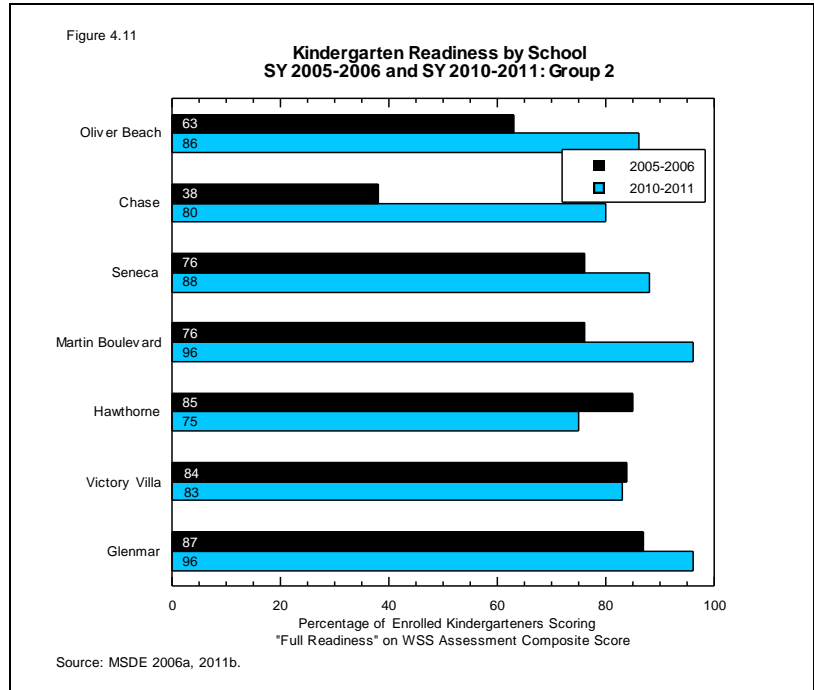
Deep Creek also traditionally performed more poorly than those at Hawthorne on the MMSR. The combination of increased class sizes and the influx of less prepared students likely contributed to the decrease in "full readiness" percentage at Hawthorne. Victory Villa also had a slight decline in "full readiness" from 84 to 83 percent during the observed years (MSDE 2006a, 2011b). "Full readiness" percentages in SY 2005-2006 and SY 2010-2011 are shown for eight southeast area elementary schools in figure 4.12, Group Three. As previously mentioned, Deep Creek no longer had a kindergarten class after SY 2005-2006, so no "full readiness" percentage was available for the school in SY 2010-2011. Six schools made gains in "full readiness" from SY 2005-06 to SY 2010-11: Middleborough (66 to 91 percent); Sandalwood (64 to 94 percent); Mars Estates (68 to 75 percent); Middlesex (68 to 75 percent); Essex (51 to 89 percent); and Orems (93 to 94 percent). Sandalwood and Orems, both at 94 percent "full readiness" in SY 2010-2011, exceeded the RTT-ELC goal. Four schools —

Figure 4.12

Kindergarten Readiness by School SY 2005-2006 and SY 2010-2011: Group 3

* This school did not have a kindergarten class for this school year.

Source: MSDE 2006a, 2011b.
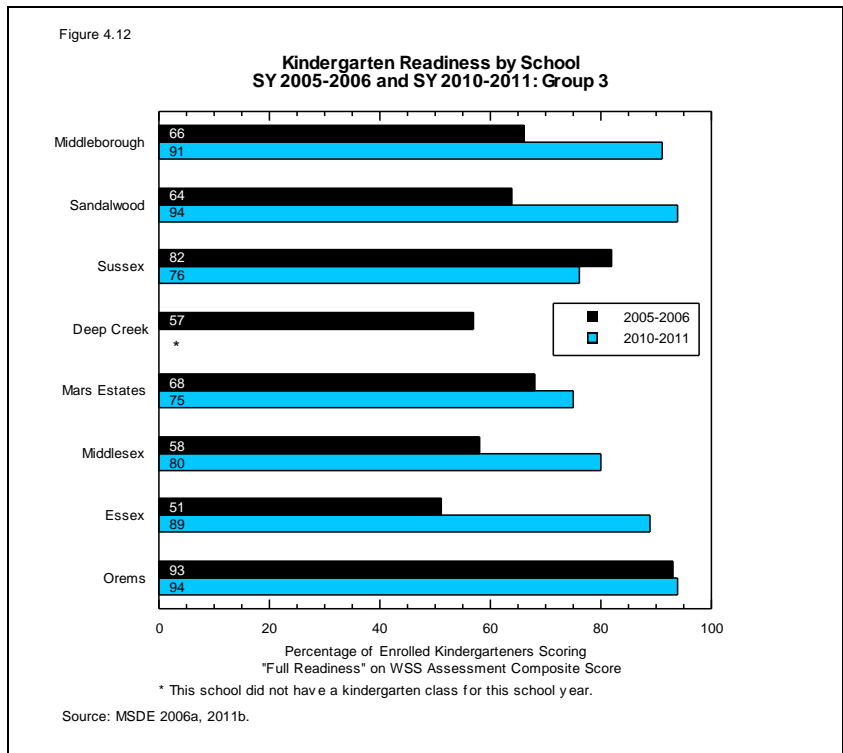
Middleborough, Sandalwood, Middlesex and Essex — improved by double digits from SY 2005-2006 "full readiness" percentages. Sussex was the only school in this group to see a decline in "full readiness" from SY 2005-06 to SY 2010-11, from 82 to 76 percent (MSDE 2006a, 2011b). Though its percentage increased from SY 2005-2006, "full readiness" at Mars Estates remained below 80 percent in SY 2010-2011 (MSDE 2006a, 2011b). Mars Estates, like a number of other southeast area elementary schools, receives Title I funding[7]

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[7] Title I funds are federal funds that are distributed to local school systems for schools with high percentages of economically disadvantaged students. These funds are used to ensure that all children have the opportunity to achieve state academic standards.

Figure 4.13

Kindergarten Readiness by School
SY 2005-2006 and SY 2010-2011: Group 4

School	2005-2006	2010-2011
Charlesmont	82	65
Battle Grove	81	83
Bear Creek	57	88
Sandy Plains	58	85
Grange	77	81
Logan	75	78
Dundalk	74	89
Norwood	81	70

Legend:
- ■ 2005-2006
- □ 2010-2011

Percentage of Enrolled Kindergarteners Scoring
"Full Readiness" on WSS Assessment Composite Score

Source: MSDE 2006a, 2011b.

"Full readiness" percentages for SY 2005-2006 and SY 2010-2011 are shown for the remaining 8 southeast elementary schools in figure 4.13, Group Four. Six of the eight schools shown had improved "full readiness" percentages: Battle Grove (81 to 83 percent); Bear Creek (57 to 88 percent); Sandy Plains (58 to 85 percent); Grange (77 to 81 percent); Logan (75 to 78 percent); and Dundalk (74 to 89 percent). Two schools, Charlesmont and Norwood, saw decreased "full readiness" percentages from SY 2005-06 to SY 2010-11. Both of these schools receive Title I funding and have high Hispanic populations in comparison to other area schools (BCPS 2013a). None of these schools had an SY 2010-2011 "full readiness" percentage that met the RTT-ELC goal of 92 percent.

Overall, of the 32 southeast area schools studied, 26 schools improved or maintained their "full readiness" percentages on the WSS composite from SY 2005-2006 to SY 2010-2011. Five schools had lower "full readiness" percentages in SY 2010-11 than in SY 2005-06, and one school no longer had a kindergarten class. Chase, Sandalwood, Essex and Bear Creek each improved by more than 30 percentage points from SY 2005-06 to SY 2010-11 (MSDE 2006a, 2011b). Since 2005, early childhood care programs have been subject to a more rigorous accreditation process in order to better prepare students for the school environment they will encounter beginning in kindergarten (MSDE 2013). Nine southeast area schools had SY 2010-11 percentages that were above the 2015 RTT-ELC goal. Eight schools — Eastwood, Elmwood, Hawthorne, Sussex, Mars Estates, Charlesmont, Logan and Norwood — had "full readiness" percentages below 80 percent in SY 2010-2011 (MSDE 2006b, 2011b). Of the lowest performing schools, only Eastwood is not a Title I funding recipient. The highest performing schools all have more homogeneous student bodies (BCPS 2013a).

4.3 Later Education

The Task Force selected four distinct measures of later educational attainment: (1) Maryland School Assessment (MSA) scores, (2) chronic school absenteeism, (3) high school leaver rates and (4) graduating seniors with four-year college plans. While the latter two indicators apply only to the high school experience, MSA scores are examined for both elementary and middle schools, and chronic absenteeism is studied throughout the educational process.

4.3.1 Maryland School Assessment Scores

The Maryland School Assessment is a statewide exam given to students in grades 3-8 in order to measure reading, math, and science curricula that is expected be learned by students at each grade level. The test was first used in 2001 in order to meet requirements of the federal No Child Left Behind Act. The MSA consists of both multiple choice and written-answer questions, and each student receives a score of "basic," "proficient" or "advanced." Students who score "basic" on a portion of the MSA are not performing at grade level, while those scoring "proficient" or "advanced" are performing at or above expectancy, respectively (MSDE 2012a).

4.3.1.1. Elementary School

Literacy at the elementary school level is particularly important because of the influence it can have on performance in later education. Figure 4.14 shows the percentage of elementary school students in grades 3-5 that scored at least proficient on the reading MSA during SY 2005-2006 and SY 2010-2011. Since the SY 2005-06 data, all three

Figure 4.14

Maryland School Assessments by Area
SY 2005-2006 and SY 2010-2011: Grades 3-5

Source: MSDE 2006b, 2011b.
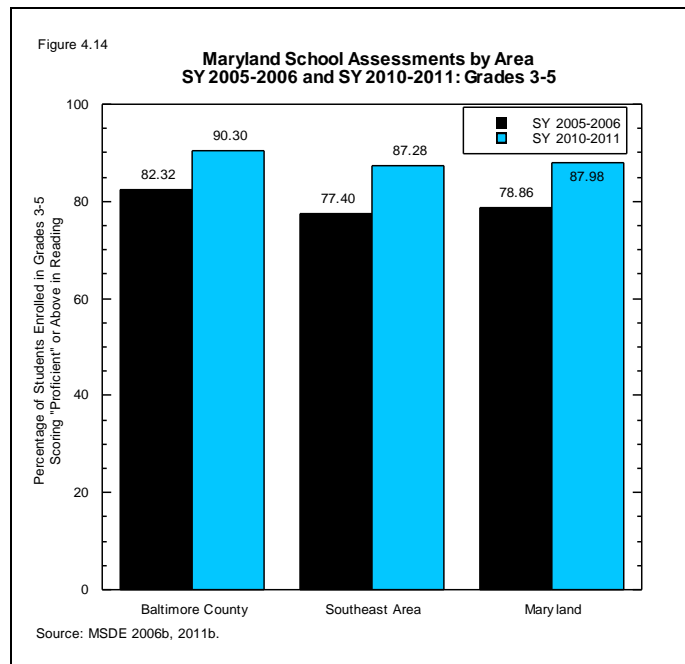
observed areas have shown an increase in the number of elementary students scoring proficient or above in reading. In both SY 2005-06 and SY 2010-11, Baltimore County had the highest proficiency in reading (82.32 and 90.30 percent). The southeast area had the lowest proficiency of the three observed areas, but there is less than a one percent difference between the proficiency percentages of the southeast area and Maryland. Like Baltimore County, the southeast area and Maryland each showed significant improvement in reading proficiency since the SY 2005-2006 MSA: the southeast area (77.40 to 87.28 percent) and Maryland (78.86 to 87.98 percent). The southeast area showed the largest improvement at 9.88 percentage points (MSDE 2006b, 2011b).

Figure 4.15

**Maryland School Assessments by School,
SY 2005-2006 and SY 2010-2011: Grades 3-5, Group 1**

Chesapeake Terrace — 77.78 / 94.83
Edgemere — 83.04 / 94.88
Berkshire — 74.69 / 96.36
Eastwood — 87.93 / 82.93
Colgate — 69.44 / 80.63
Red House Run — 90.00 / 92.80
Shady Spring — 79.59 / 87.40
McCormick — 73.16 / 83.54
Elmwood — 74.69 / 88.31

■ SY 2005-2006
■ SY 2010-2011

Southeast Area,
SY 2010-11:
87.28

Percentage of Students Enrolled in Grades 3-5
Scoring "Proficient" or Above in Reading

Source: MSDE 2006b, 2011b.

Figure 4.16

**Maryland School Assessments by School
SY 2005-2006 and SY 2010-2011: Grades 3-5, Group 2**

Oliver Beach — 89.76 / 90.00
Chase — 80.69 / 84.96
Seneca — 83.64 / 92.98
Martin Boulevard — 82.44 / 87.93
Hawthorne — 63.11 / 76.92
Victory Villa — 86.75 / 94.44
Glenmar — 72.00 / 88.89

■ SY 2005-2006
■ SY 2010-2011

Southeast Area,
SY 2010-11:
87.28

Percentage of Students in Grades 3-5
Scoring "Proficient" or Above in Reading

Source: MSDE 2006b, 2011b.

Reviewing MSA reading scores at the school level speaks to how individual schools are performing against the state curriculum. In figure 4.15, Group One, 8 of the 9 schools showed improvement in MSA proficiency percentage from SY 2005-2006 to SY 2010-2011: Chesapeake Terrace (77.78 to 94.83 percent); Edgemere (83.04 to 94.88 percent); Berkshire (74.69 to 96.36 percent); Colgate (69.44 to 80.63 percent); Red House Run (90.00 to 92.80 percent); Shady Spring (79.59 to 87.40 percent); McCormick (73.16 to 83.54 percent); and Elmwood (74.69 to 88.31 percent). Four schools — Chesapeake Terrace, Edgemere, Berkshire and Red House Run — were above 90 percent proficient in SY 2010-11, an increase from just one school in SY 2005-06. Chesapeake Terrace, Berkshire, Colgate, McCormick and Elmwood have all showed double digit increases in MSA reading proficiency since SY 2005-2006. Eastwood is the lone school to have experienced a decrease, from 87.93 to 82.93 percent (MSDE 2006b, 2011b). Eastwood is a magnet school focusing on environmental science, but elementary magnet placement is determined through a lottery process and not student admission assessments (BCPS 2012c:3). Students who attend this magnet school are not necessarily smarter than those at other schools in the area, which differs from other magnet schools that select students based on academic achievement.
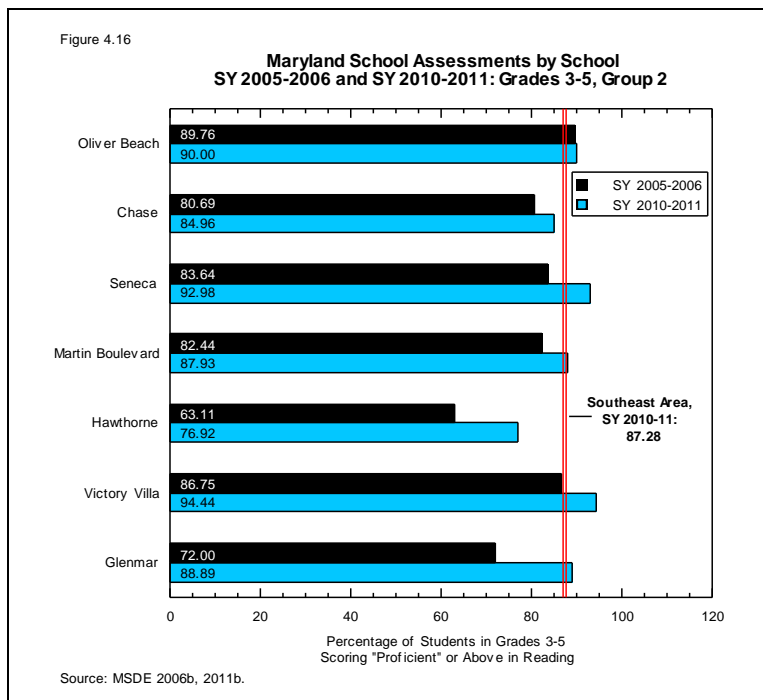
Figure 4.16, Group Two, displays the scores of seven schools in the southeast area that all experienced MSA reading proficiency increases from SY 2005-2006 to SY 2010-2011: Oliver Beach (89.76 to 90.00 percent); Chase (80.69 to 84.96 percent); Seneca (83.64 to 92.98 percent); Martin Boulevard (82.44 to 87.93 percent); Hawthorne (63.11 to 76.92 percent); Victory Villa (86.75 to 94.44 percent); and Glenmar (72.00 to 88.89 percent). Oliver Beach, Seneca and Victory Villa all had proficiency percentages at or above 90 percent for SY 2010-11. Glenmar showed an increase in MSA reading proficiency of 16.89 percentage points. Although it has

experienced an increase in MSA reading proficiency since SY 2005-06, Hawthorne's proficiency was still below 80 percent in SY 2010-11 (MSDE 2006b, 2011b). The school receives Title I funding due to approximately three-fourths of students receiving free and reduced meals (FARM) (BCPS 2013a). Elementary MSA reading proficiency for eight southeast area schools in SY 2005-2006 and SY 2010-2011 is displayed in figure 4.17, Group Three. Seven of these schools showed improvement in MSA reading proficiency over the observed years: Middleborough (91.18 to 94.70 percent); Sandalwood (61.44 to 84.34 percent); Sussex (70.11 to 88.37 percent); Mars Estates (61.24 to 77.42 percent); Middlesex (69.07 to 83.81 percent); Essex (81.15 to 90.41

Figure 4.17

**Maryland School Assessments by School
SY 2005-2006 and SY 2010-2011: Grades 3-5, Group 3**

Source: MSDE 2006b, 2011b.

percent); and Orems (83.92 to 95.17 percent). Middleborough, Essex and Orems all have proficiency percentages above 90 percent. Five schools — Sandalwood, Sussex, Mars Estates, Middlesex and Orems — experienced MSA reading proficiency increases of 10 percentage points or more. By contrast, Deep Creek saw a decrease in proficiency from 80.00 to 78.24 percent from SY 2005-06 to SY 2010-11. Mars Estates and Deep Creek each have MSA reading proficiencies that are below 80 percent (MSDE 2006b, 2011b). Both of these schools also receive Title I supplemental funding due to economic hardship (BCPS 2013a).

Figure 4.18

**Maryland Schools Assessments by School
SY 2005-2006 and SY 2010-2011: Grades 3-5, Group 4**

Source: MSDE 2006b, 2011b.
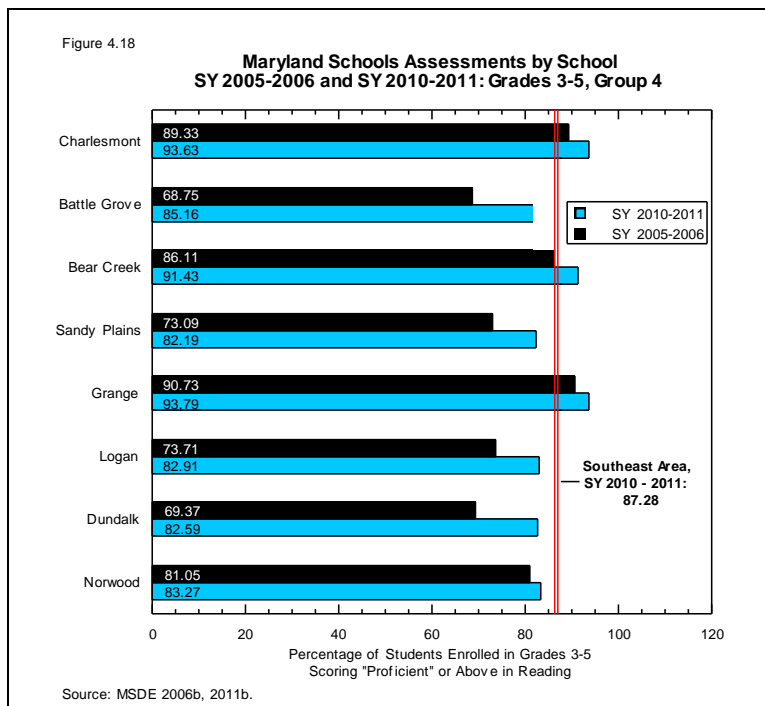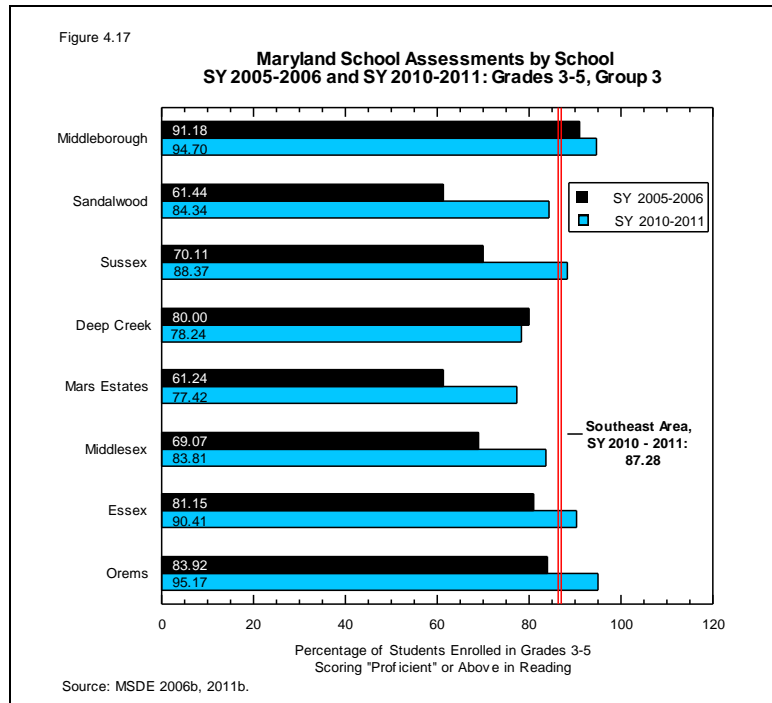
The MSA reading proficiency for the final eight observed southeast area schools is shown in figure 4.18, Group Four. All eight schools showed increased reading proficiency from SY 2005-2006 to SY 2010-2011: Charlesmont (89.33 to 93.63 percent); Battle Grove (68.75 to 85.16 percent); Bear Creek (86.11 to 91.43 percent); Sandy Plains (73.09 to 82.19 percent); Grange (90.73 to 93.79 percent); Logan (73.71 to 82.91 percent); Dundalk (69.37 to 82.59 percent); and Norwood (81.05 to 83.27 percent). Three schools — Charlesmont, Bear Creek and Grange — have MSA reading proficiencies greater than 90 percent. Two schools have improved by greater than 10 percentage points since SY 2005-06, Battle Grove by

16.41 percentage points and Dundalk by 13.22 percentage points (MSDE 2006b, 2011b).

In total, 30 of the 32 observed southeast area elementary schools experienced an increase in MSA reading proficiency from SY 2005-2006 to SY 2010-2011 data. Eastwood and Deep Creek are the only schools that experienced a decline. Twenty-three of the observed southeast area schools showed double-digit percentage improvements in MSA reading proficiency from SY 2005-2006 to SY 2010-2011. Two schools, Berkshire and Orems, had proficiency percentages of 95 percent or above by SY 2010-2011, while three schools — Deep Creek, Hawthorne and Mars Estates — had proficiency percentages that remained below 80 percent (MSDE 2006b, 2011b). One of the top performance schools, Berkshire, is a Title I school, but all three lowest performing schools receive Title I funding (BCPS 2013a).

4.3.1.2 Middle School

As student's age and progress through the education system, it is essential to ensure that they continue to learn at a grade-appropriate level. Figure 4.19 shows the middle school MSA reading proficiency percentages for Baltimore County, the southeast area and Maryland for SY 2005-2006 and SY 2010-2011. From SY 2005-06 to SY 2010-11 data, all three observed areas saw an improvement in MSA reading proficiency percentages: Baltimore County (72.63 to 82.94 percent); the southeast area (66.90 to 76.98 percent); and Maryland (69.93 to 83.52 percent). These proficiency percentages are lower than seen at the elementary level. In a reversal from SY 2005-06 data, Maryland had the highest MSA reading proficiency in SY 2010-11 data, followed by Baltimore County. The southeast area had the lowest MSA proficiency percentage in both SY 2005-2006 and SY 2010-2011. Still, all three

Figure 4.19

Maryland School Assessments by Area, SY 2005-2006 and SY 2010-2011: Grades 6-8

Source: MSDE 2006b, 2011b.

observed areas saw double digit improvements in reading proficiency percentages from SY 2005-06 to SY 2010-11, with improvements of 10.31 percentage points for Baltimore County, 10.08 percentage points for the southeast area and 13.59 percentage points for Maryland (MSDE 2006b, 2011b).

Of the eight southeast area middle schools observed (shown in figure 4.20), all showed improvements in MSA reading proficiency percentages. With a proficiency of 86.88 percent for SY 2010-2011, Sparrows Point was the only southeast area school with a proficiency percentage higher than those of Baltimore County and Maryland. Two schools — General John Stricker and Stemmers Run — had SY 2010-2011 proficiency percentages of 80.31 and 82.13 percent, respectively. These were the only other southeast area middle schools with MSA reading proficiency percentages greater than 80 percent in SY 2010-11. Though improved from SY 2005-06 percentages, five schools had SY 2010-11 MSA reading proficiency percentages below 80 percent: Dundalk (77.59 percent), Holabird (67.94 percent), Deep Creek (76.31 percent), Middle River (76.76 percent) and Golden Ring

Figure 4.20

Maryland School Assessment by School SY 2005-2006 and SY 2010-2011: Grades 6-8

Source: MSDE 2006b, 2011b.

(69.00 percent). Dundalk, General John Stricker, Holabird, Deep Creek, Stemmers Run and Golden Ring each improved by more than 10 percentage points from SY 2005-2006 to SY 2010-2011. As the next

section will show, there seems to be an inverse relationship at the middle school level between chronic absenteeism and MSA reading proficiency percentages (MSDE 2006b, 2011b).

4.3.2 Chronic School Absenteeism

MSDE defines "chronic school absenteeism" as a student missing 20 or more days in a single school year. Chronic school absenteeism is most often accompanied by absences for unauthorized purposes (frequently referred to as truancy) and can cause legal problems for parents and many other problems, educational and otherwise, for students (MSDE 2011a).

Chronic school absenteeism is usually not a standalone problem. Studies have found it to be an early indicator for later school performance, including low achievement on tests, academic failure and dropping out of high school (Bruner, Discher and Chang 2011). Chronic school absenteeism can also be a warning sign for problems the student will face in his or her adult life, including substance abuse, poverty, criminal behavior, incarceration, marital problems, violence and mental and social disorders. Although older students may decide independently from their parents or guardians whether or not to attend school, there may be other contributing factors to attendance, such as lack of supervision in the home, domestic violence, substance abuse, school safety, poverty, weather and distance, among others (Baker, Sigmon and Nugent 2001).

Figure 4.21

Chronic School Absence by Area, SY 2005-2006 and SY 2010-2011: Elementary School

* This information could not be generated due to the suppression of some schools' data.

Source: MSDE 2006b, 2011b.

4.3.1.1 Elementary School

Unlike older students, elementary school students are dependent upon a parent or guardian to ensure school attendance. In figure 4.21, the chronic school absence rates for SY 2005-2006 and SY 2010-2011 are shown by area for the elementary level (grades 1-5). The chronic absenteeism rate for the southeast area could not be tabulated for either school year because some of the included elementary schools had suppressed rates. Maryland and Baltimore County saw little change in chronic absenteeism rates from SY 2005-06 to SY 2010-11. During both observed years, Baltimore County had a slightly lower rate than the state. The Baltimore County chronic absenteeism rate showed minimal decline from 6.32 percent in SY 2005-06 to 6.17 percent in SY 2010-11. The chronic absenteeism rate in Maryland remained almost constant, decreasing slightly from 6.51 to 6.50 percent (MSDE 2006b, 2011b).

**Elementary Chronic School Absenteeism by School,
SY 2005-2006 and SY 2010-2011: Group 1**

Percentage of Students Enrolled in Grades 1-5
Absent More Than 20 Days

* Data were suppressed due to total being less than 5% of student body.

Source: MSDE 2006b, 2011b.

**Elementary Chronic School Absenteeism by School,
SY 2005-2006 and SY 2010-2011: Group 2**

Percentage of Students Enrolled in Grades 1-5
Absent More Than 20 Days

* Data was suppressed due to total being less than 5% of student body

Source: MSDE 2006b, 2011b.

By school, chronic absenteeism rates varied from suppressed to double digits in SY 2005-2006 and SY 2010-2011. Of the nine schools shown in figure 4.22, Group One, six had chronic absenteeism rate declines in the observed years: Chesapeake Terrace (11.35 percent to suppressed), Berkshire (7.17 to 5.92 percent), Eastwood (9.43 percent to suppressed), Colgate (15.77 to 10.42 percent), Red House Run (9.30 to 6.90 percent) and Shady Spring (6.45 to 6.42 percent). In SY 2010-11, Chesapeake Terrace and Eastwood had chronic absenteeism rates that were suppressed because the absenteeism proportion was less than five percent of the student body, so these schools were among the highest performers of the schools observed. Even though it experienced a decline, the chronic absenteeism rate at Colgate was still high in SY 2010-11, at 10.42 percent. Three schools — Edgemere, McCormick and Elmwood — showed an increase in chronic absenteeism in the studied years. Elmwood, which had a suppressed rate of less than five percent in SY 2005-2006, had a rate of 6.83 percent in SY 2010-2011. The increases in SY 2010-11 chronic absenteeism rates for Edgemere (5.91 to 6.74 percent) and McCormick (6.12 to 8.33 percent) occurred in schools that had some of the lower rates in SY 2005-06 (MSDE 2006b, 2011b).
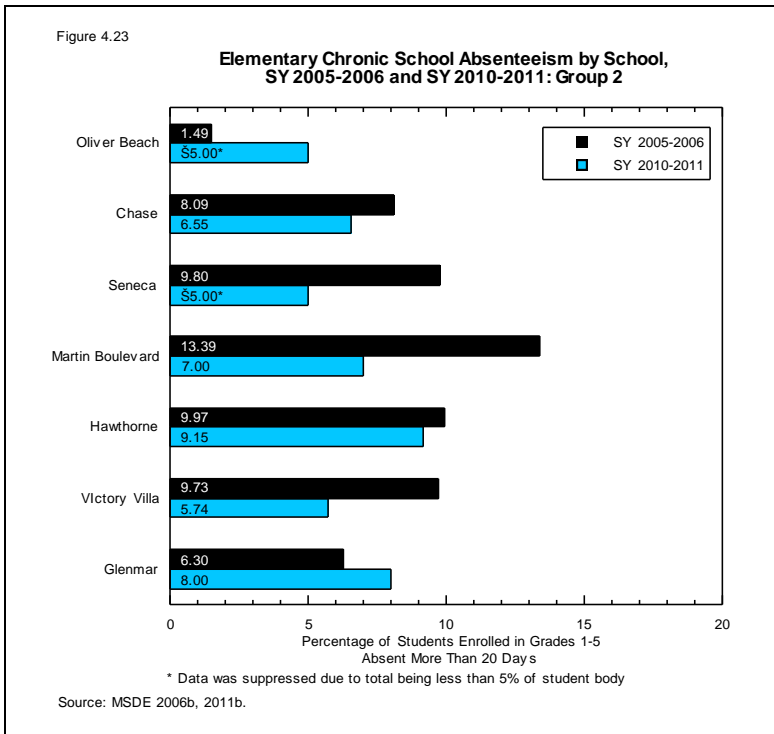
As with the first group of elementary schools, the schools shown in figure 4.23, Group Two, showed mixed results for chronic absenteeism rates from SY 2005-2006 to SY 2010-2011. Glenmar was the only school of this group that experienced a definitive increase in its chronic absenteeism rate during the observed years, from 6.30 to 8.00 percent. Oliver Beach was among the best performers in chronic school absenteeism, with a known rate of 1.49 percent in SY 2005-06 and a suppressed rate of less than five percent in SY 2010-11. Seneca also had a suppressed rate for SY 2010-2011, down from its 9.80 percent of students chronically absent in SY 2005-2006. The other four schools shown also experienced declines in chronic absenteeism rates during the two school years shown: Chase (8.09 to 6.55 percent), Martin Boulevard

Figure 4.24

Elementary Chronic School Absenteeism by School, SY 2005-2006 and SY 2010-2011: Group 3

Source: MSDE 2006b, 2011b.

(13.39 to 7.00 percent), Hawthorne (9.97 to 9.15 percent) and Victory Villa (9.73 to 5.74 percent). The Martin Boulevard rate of 7.00 percent for SY 2010-2011 was almost half that of its 13.39 percent rate in SY 2005-2006 (MSDE 2006b, 2011b).
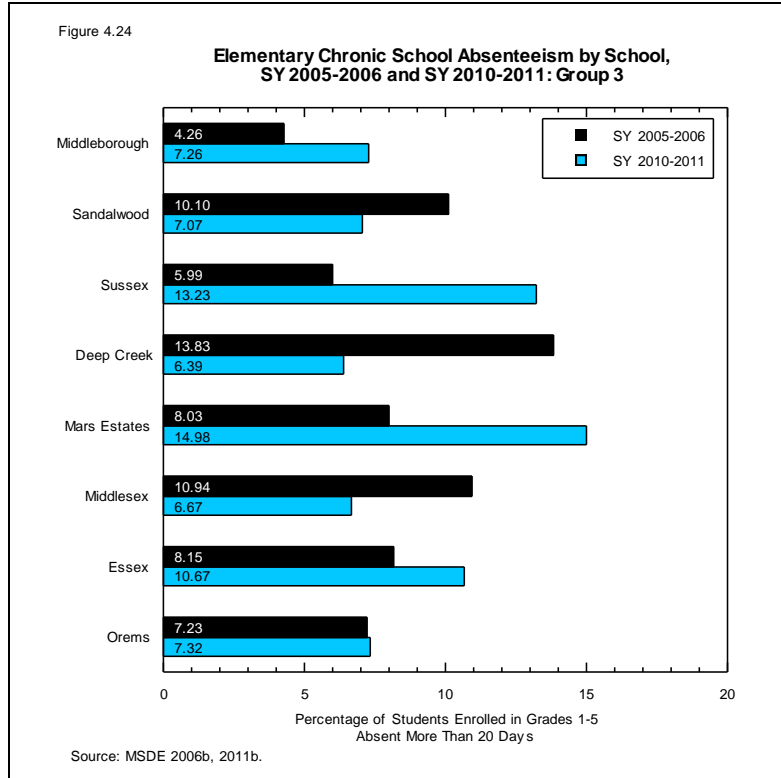
Figure 4.24, Group Three, shows the chronic absenteeism rates for eight southeast area schools in SY 2005-2006 and SY 2010-2011. Only three of the eight schools shown had chronic absenteeism rate decreases from SY 2005-06 to SY 2010-11: Sandalwood (10.10 to 7.07 percent), Deep Creek (13.83 to 6.39 percent) and Middlesex (10.94 to 6.67 percent). For the same years, the other five schools experienced chronic absenteeism rate increases: Middleborough (4.26 to 7.26 percent), Sussex (5.99 to 13.23 percent), Mars Estates (8.03 to 14.98 percent), Essex (8.15 to 10.67 percent) and Orems (7.23 to 7.32 percent). The SY 2010-11 rates for Sussex, Mars Estates and Essex

Figure 4.25

Elementary Chronic School Absenteeism by School SY 2005-2006 and SY 2010-2011: Group 4

Source: MSDE 2006b, 2011b.

60
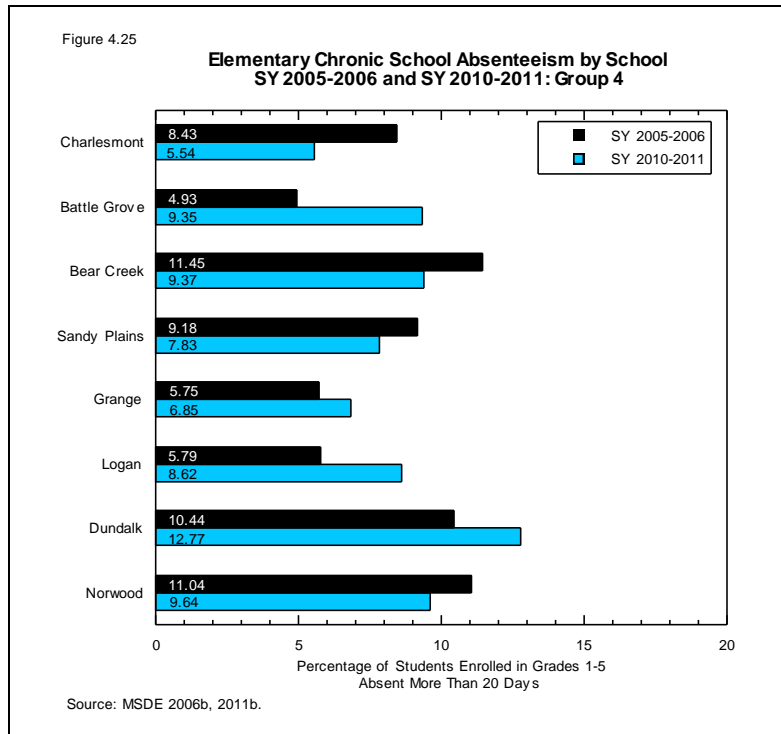
were all greater than 10 percent (MSDE 2006b, 2011b). While the Deep Creek rate halved from 13.83 to 6.39 percent between SY 2005-06 and SY 2010-11, the Sussex rate more than doubled in that period from 5.99 to 13.23 percent (MSDE 2006b, 2011b). The lack of consistency among the rate changes in schools stresses the bearing that outside factors have on this indicator.

Of the remaining southeast area elementary schools, shown in figure 4.25, Group Four, four had rate decreases from SY 2005-2006 to SY 2010-2011 data: Charlesmont (8.43 to 5.54 percent), Bear Creek (11.45 to 9.37 percent), Sandy Plains (9.18 to 7.83 percent) and Norwood (11.04 to 9.64 percent). The other four schools experienced chronic absenteeism rate increases in the observed years: Battle Grove (4.93 to 9.35 percent), Grange (5.75 to 6.85 percent), Logan (5.79 to 8.62 percent) and Dundalk (10.44 to 12.77 percent) (MSDE 2006b, 2011b).

Among the 32 included southeast area schools, 19 schools experienced a decline in chronic school absenteeism rates from SY 2005-2006 to SY 2010-2011, and the remaining 13 schools had increased rates during these years. In SY 2010-11, four schools — Chesapeake Terrace, Eastwood, Oliver Beach and Seneca — had suppressed chronic absenteeism rates of five percent or less (MSDE 2006b, 2011b). None of the schools with suppressed chronic absenteeism rates receive Title I funding (BCPS 2013a). For this same school year, Colgate, Sussex, Mars Estates, Essex and Dundalk had double-digit chronic absenteeism rates (MSDE 2006b, 2011b). Essex is the only one of these five schools that is not a Title I recipient. These five lowest performing schools also have high mobility and more inexperienced teachers, in comparison to some other observed elementary schools (BCPS 2013a). The chronic absenteeism rate was highest at Mars Estates in SY 2010-2011, at 14.98 percent. Four schools — Chesapeake Terrace, Colgate, Martin Boulevard and Victory Villa — had chronic absenteeism rate declines of at least five percentage points between SY 2005-06 and SY 2010-11 data (MSDE 2006b, 2011b). Based on the breakdown of the high- and low-performing southeast area elementary schools for this indicator, schools that receive Title I funding, have high mobility, and inexperienced teaching staff are particularly vulnerable to high chronic absenteeism rates.

4.3.1.2 Middle School

Figure 4.26 displays chronic middle school absenteeism rates for Baltimore County, the southeast area, and Maryland in SY 2005-2006 and SY 2010-2011. The data show that all three observed areas had chronic absenteeism rate declines from SY 2005-2006 to SY 2010-201l: Baltimore County (11.16 to 10.52 percent); the southeast area (14.73 to 13.28 percent); and Maryland (13.03 to 9.50 percent). The decline of 3.53 percentage points experienced by the state from SY 2005-2006 gave it the lowest rate in SY 2010-11. Baltimore County, which had the lowest chronic absenteeism rate of the three areas in SY 2005-2006, only experienced a slight decline of less than one percentage point to its SY 2010-2011 rate and was surpassed by the state. The southeast area had the highest chronic school absence of the three areas during both years observed (MSDE 2006b, 2011b).

Figure 4.26

Chronic School Absence by Area
SY 2005-2006 and SY 2010-2011: Middle School

Source: MSDE 2006b, 2011b.

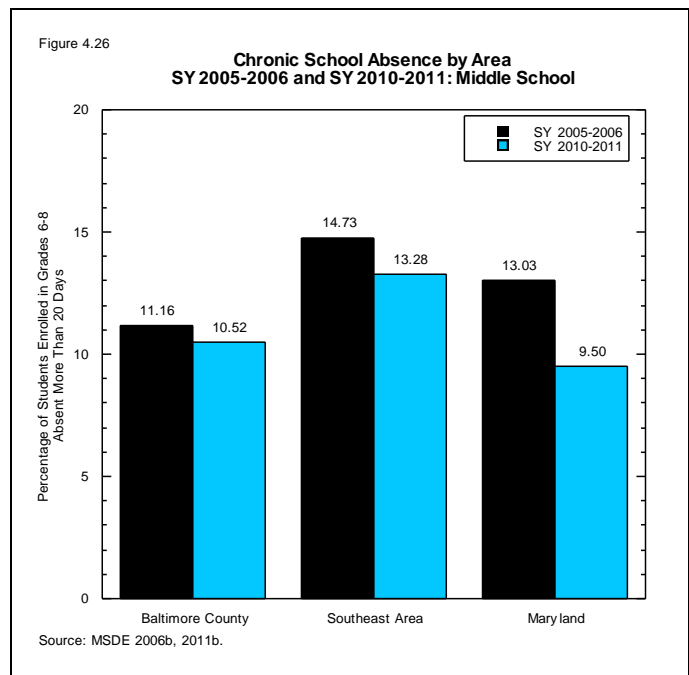In figure 4.27, the chronic school absenteeism rates for southeast area middle schools in SY 2005-2006 and SY 2010-2011 are shown. Four schools experienced declines in chronic absenteeism rates from SY 2005-06 to SY 2010-11: Sparrows Point (8.82 to 5.27 percent), Dundalk (13.52 to 12.97 percent), General John Stricker (19.59 to 13.25 percent) and Deep Creek (13.83 to 6.39 percent). The other four southeast

area middle schools showed chronic absenteeism increases during the same period: Holabird (13.66 to 14.84 percent), Stemmers Run (15.65 to 16.83 percent), Middle River (10.60 to 12.65 percent) and Golden Ring (18.96 to 19.00 percent). Sparrows Point, which had the lowest chronic school absence in SY 2005-06, maintained and improved upon that percentage for SY 2010-2011, giving the school the lowest rate that year as well, at 5.27 percent (MSDE 2006b, 2011b). The chronic absenteeism rate at Deep Creek was cut by more than half from SY 2005-06 to SY 2010-11, and at 6.39 percent, Deep Creek was the only other southeast area school aside from Sparrows Point with a rate below 10 percent (MSDE 2006b, 2011b).

Figure 4.27

**Chronic School Absence by School
SY 2005-2006 and SY 2010-2011: Middle School**

Source: MSDE 2006b, 2011b.
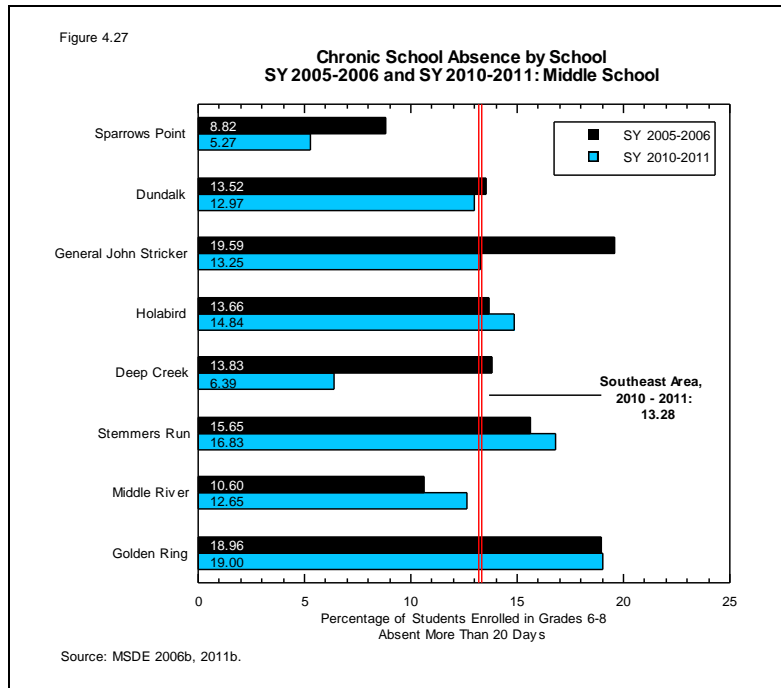
4.3.1.3 High School

By the time students reach high school (grades 9-12), most have set ideas about the value of education in their lives. When high school students do not value education themselves or have parents that do not value education, or have grown up in a cultural or economic environment that places a negative stigma on education, they may be extremely difficult to prevent from being absent or skipping partial school days. Studies have noted that due to lack of monitoring, high school chronic absenteeism rates can grow exponentially before the problem is identified (Balfanz and Byrnes 2012:5). Figure 4.28 demonstrates

Figure 4.28

**Chronic School Absence by Area
SY 2005-2006 and SY 2010-2011: High School**

* This information could not be generated due to the suppression of some schools' data.

Source: MSDE 2006b, 2011b.
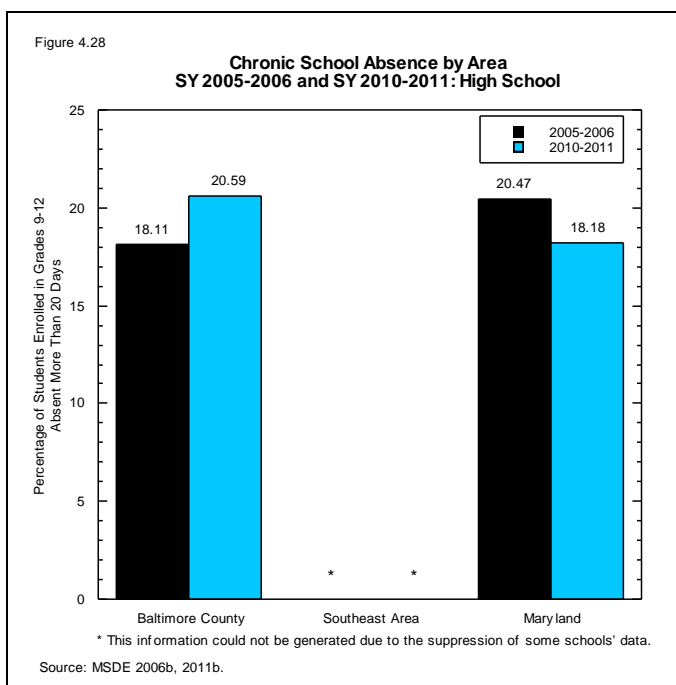
high school chronic absenteeism rates by area for SY 2005-2006 and SY 2010-2011. Due to suppressed rates of less than five percent at Eastern Technical, the southeast area chronic absenteeism rate could not be tabulated for either school year observed. As with chronic absenteeism at the middle school level, Maryland had the lowest chronic absenteeism of the observed areas at the high school level in SY 2010-11. The state chronic absenteeism rate declined from 20.47 percent in SY 2005-2006 to 18.18 percent in SY 2010-2011. Even following a rate decline, chronic absenteeism is still a big concern in high schools throughout

Maryland. For the same school years, Baltimore County experienced an increase in chronic absenteeism. With a rate of 20.59 percent in SY 2010-11, more than one in five Baltimore County high school students were chronically absent (MSDE 2006b, 2011b).

Figure 4.29

Chronic School Absence by School
SY 2005-2006 and SY 2010-2011: High School

Patapsco — 20.92 / 24.83
Dundalk — 25.68 / 31.67
Kenwood — 15.42 / 28.01
Eastern Technical — * / *
Chesapeake — 23.51 / 29.36
Sparrows Point — 14.86 / 14.50
Overlea — 17.41 / 30.12

Legend: 2005-2006, 2010-2011

Percentage of Students Enrolled in Grades 9-12 Absent More Than 20 Days
* Data were suppressed due to total being less than 5% of student body.

Source: MSDE 2006b, 2011b.

School level chronic absenteeism data for southeast area high schools in SY 2005-2006 and SY 2010-2011 (shown in figure 4.29) reaffirm the increased chronic absenteeism rate of Baltimore County. Five southeast area high schools had higher rates of chronic absenteeism in SY 2010-2011 than in SY 2005-2006: Patapsco (20.92 to 24.83 percent), Dundalk (25.68 to 31.67 percent), Kenwood (15.42 to 28.01 percent), Chesapeake (23.51 to 29.36 percent) and Overlea (17.41 to 30.12 percent). More than one in four students at Dundalk, Kenwood, Chesapeake and Overlea were chronically absent in SY 2010-11, and Chesapeake and Overlea each experienced rate increases of greater than 10 percentage points between the observed years (MSDE 2006b, 2011b). The five southeast area schools that had increased chronic absenteeism between SY 2005-2006 and SY 2010-2011, with few exceptions, exhibited high rates of teachers with less than five years of experience, high mobility, and lower attendance rates among Hispanic and FARM students. In addition, Chesapeake and Patapsco had more students than were meant to be in those schools (BCPS 2013b). Dundalk had the highest chronic absenteeism rate in SY 2010-2011, at 31.67 percent (MSDE 2011b). According to a Dundalk administrator, the school has seen large increases in students receiving FARM, high mobility, 20 percent staff decreases in two years, and large increases in students who speak English as a second language (Shouldice 2013). From SY 2005-06 to SY 2010-11, the chronic absenteeism rate at Sparrows Point decreased slightly from 14.86 to 14.50 percent (MSDE 2006b, 2011b). When the demographics of the student population at Sparrows Point are considered, its low and decreasing absenteeism rate is to be expected. Sparrows Point has a very homogeneous student body, with low mobility and few students receiving FARM (BCPS 2013b).

Eastern Technical was the only high school with a suppressed chronic absenteeism rate during both observed school years, meaning the percentage of students chronically absent was less than five percent of the student body (MSDE 2006b, 2011b). However, Eastern Technical is a full technical school, and students go through a rigorous application process to be admitted. This means that students likely already have a strong desire to be in attendance. Additionally, students at Eastern Technical must adhere to strict attendance guidelines in order to maintain their slots at the school, and this provides an extra incentive for attendance (BCPS 2012e).

4.3.3 High School Leaver Rate

In 2010, 7.4 percent of those ages 16 to 24 in the United States were high school dropouts, but the national dropout percentage has been in decline for some time (NCES 2012a).

The previous report used high school dropouts as an indicator. However, the change in FERPA student privacy laws made this an unusable indicator for the current report. Instead, the committee agreed to use the graduation leaver rate as the substitute indicator (Task Force 2012b). The graduation leaver rate is the percentage of students from a class that receive a Maryland high school diploma during a school year. The leaver rate follows one class from grades 9-12. Figure 4.30 illustrates how the graduation leaver rate is calculated. Deceased students and students that transfer to another school are excluded, and those who leave and re-enter the school are not counted more than once (MSDE 2012b).

Figure 4.30

Graduation Leaver Rate

$$\frac{90 \text{ (Number of graduates)}}{(90+10)} = \frac{90}{100} = 90\%$$

Number of graduates = 90

(90+10) = Number of graduates + Sum of dropouts in Grades 9-12

Leaver rate = 90%

Source: MSDE 2012b.

Figure 4.31
High School Leaver Rate by Area, SY 2005-2006 and SY 2010-2011

Percentage of Students Who Graduated in a Year Out of Those Counted in a Senior Class

- Baltimore County: 2005-2006 = 83.25, 2010-2011 = 83.06
- Southeast Area: * , *
- Maryland: 2005-2006 = 85.44, 2010-2011 = 87.01

* This rate cannot be tabulated due to suppressed numbers for one or more schools.

Source: MSDE 2006b, 2011b.

For SY 2005-06 and SY 2010-11, figure 4.31 displays the graduation leaver rates for the observed areas. The leaver rate for the southeast area in SY 2005-2006 and SY 2010-2011 could not be tabulated because one high school had a suppressed rate during both years. During both observed years, Maryland had a higher leaver rate than Baltimore County. The state graduation leaver rate rose from 85.44 percent in SY 2005-06 to 87.01 percent in SY 2010-11. There was little change in the Baltimore County rate from SY 2005-06 to SY 2010-11, but the slight change in the graduation leaver rate for the area was a decline from 83.25 to 83.06 percent (MSDE 2006b, 2011b).

The change in high school leaver rate for schools in the southeast area (shown in figure 4.32) from SY 2005-2006 to SY 2010-2011 data could help explain the observed changes in the Baltimore County rate. Three southeast area high schools experienced a decline in leaver rate from SY 2005-06 to SY 2010-11: Dundalk (73.51 to 71.07 percent), Sparrows Point (88.18 to 83.00 percent) and Overlea (82.39 to 74.26 percent). Three other southeast area schools had increased leaver rates from SY 2005-06 to SY 2010-11:

Patapsco (79.33 to 83.51 percent), Kenwood (79.33 to 83.81 percent), and Chesapeake (73.46 to 85.92 percent). As in the other indicators, Eastern Technical was the high performer of the southeast area schools in leaver rate for both SY 2005-2006 and SY 2010-2011. During both observed school years, the leaver rate for Eastern Technical was suppressed at greater than 95 percent, yet the leaver rates for Dundalk and Overlea remained below 80 percent for SY 2010-2011.

Interestingly, there is not a clear inverse relationship between chronic absenteeism and leaver rates for all high schools, though this relationship does seem to hold true for some of the worst performing schools in the southeast area (MSDE 2006b, 2011b). Larger class sizes, fewer course and program offerings, and fewer teachers, among other things, can negatively impact the leaver rate in southeast area high

Figure 4.32

High School Leaver Rate by School, SY 2005-2006 and SY 2010-2011

Percentage of Students Who Graduated in a Year Out of Those Counted in a Senior Class

* These data were suppressed, but the percentage is known to be 95% or greater.

Source: MSDE 2006b, 2011b.

schools. In 2011 alone, Baltimore County high schools faced faculty cuts of as much as 10 percent per school, which resulted in an average class size of 29 students and the loss of a number of Advanced Placement (AP), elective and technical courses. These $12 million in cuts directly impacted the quality of education received at Baltimore County high schools (Bowie 2011).
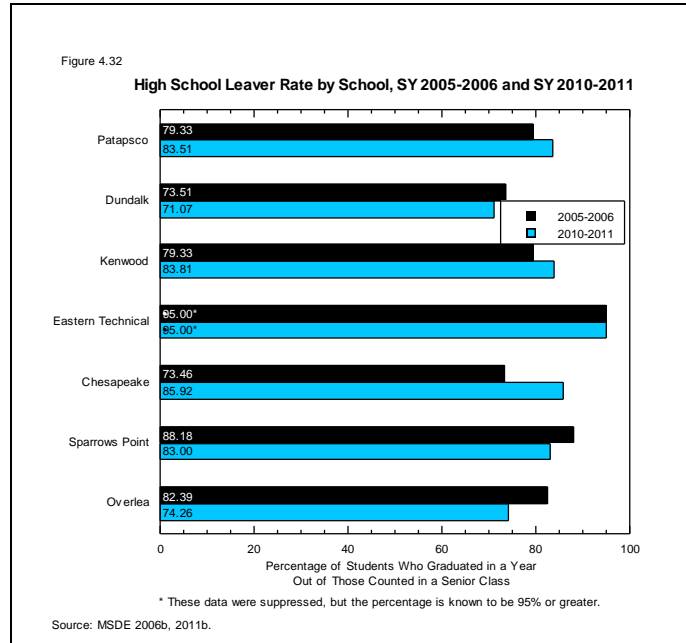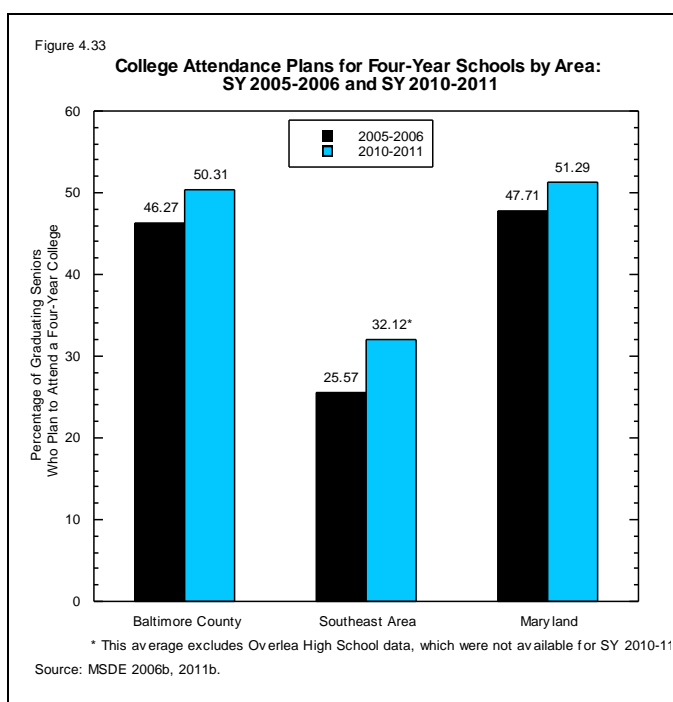
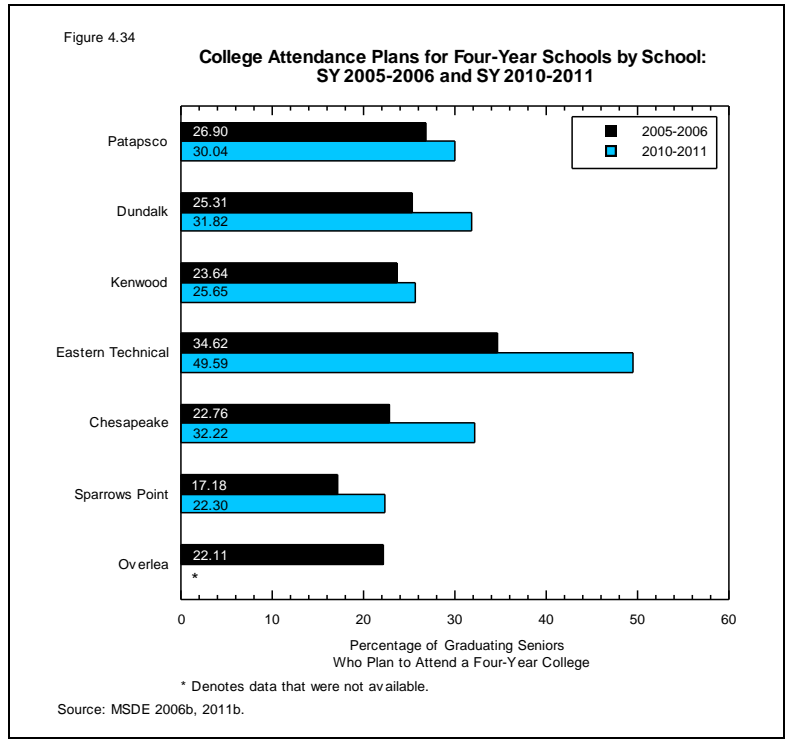## 4.3.4 Graduating Seniors with Plans to Attend Four-year Colleges

In 2011, those who had a bachelor's degree made an average of $415 per week more than those with only a high school diploma. Additionally, the unemployment rate in 2011 was 4.9 percent among those with a bachelor's degree, compared with 9.4 percent for those with only a high school diploma (BLS 2012b). Still, it can be difficult for young people to complete a four-year college education. A lack of support of or emphasis on college education at home and in secondary schools can greatly decrease a student's chances of completing a higher education degree. Some students also see greater appeal in the work force than continuing school after high school. The rising cost of a four-year degree is perhaps the biggest deterrent from students continuing their education, though. For the 2010-2011 academic year, the average cost of a year's tuition plus room and board at a four-year public institution was $22,092, and this cost rises every year (NCES 2012b).

Every year, high school seniors in Maryland are given a graduation follow-up questionnaire. This questionnaire asks graduates to document their plans following graduation, and it includes questions regarding whether the student has plans for college (two- or four-year), specialty training or technical education, employment, military, or a combination of two or more of these. MSDE then compiles the collected data into the Grade 12 Documented Decisions report, which is released annually as part of the Maryland Report Card (MSDE 2011b).

Despite rising costs and other opposing factors, college attendance is on the rise. From SY 2005-2006 to SY 2010-2011 (seen in figure 4.33), the percentage of graduating seniors with four-year college plans rose in Baltimore County, the southeast area and Maryland. The state had the highest percentage of seniors with four-year college plans in both SY 2005-06 and SY 2010-11, increasing from 47.71 to 51.29 percent in those school years. In the same observed school years, seniors with four-year college plans in Baltimore County also rose from 46.27 to 50.31 percent, so the Baltimore County percentage was only slightly less than that of the state. While the four-year college plans percentage in the southeast area increased from 25.57 percent in SY 2005-2006 to 32.12 percent[8] in SY 2010-2011, the area was still sending almost 20 percent fewer of its students to four-year colleges than either Baltimore County or Maryland (MSDE 2006b, 2011b).

Figure 4.33

College Attendance Plans for Four-Year Schools by Area: SY 2005-2006 and SY 2010-2011

* This average excludes Overlea High School data, which were not available for SY 2010-11
Source: MSDE 2006b, 2011b.

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[8] The SY 2010-2011 southeast area percentage is based on the average of data available from southeast area high schools in that school year. No Grade 12 Documented Decisions data were available for Overlea High School for SY 2010-2011.

Figure 4.34

College Attendance Plans for Four-Year Schools by School:
SY 2005-2006 and SY 2010-2011

Source: MSDE 2006b, 2011b.

As seen in figure 4.34, from SY 2005-06 to SY 2010-11 the observed southeast area schools all showed improvement in the percentage of graduating seniors with plans to attend a four-year college: Patapsco (26.90 to 30.04 percent), Dundalk (25.31 to 31.82 percent), Kenwood (23.64 to 25.65 percent), Eastern Technical (34.62 to 49.59 percent), Chesapeake (22.76 to 32.22 percent) and Sparrows Point (17.18 to 22.30 percent) (MSDE 2006b, 2011b). Overlea, which was also used in this study, did not submit Grade 12 Documented Decisions data to the state for SY 2010-2011, so it is unknown if the school improved upon its 22.11 percent of students with four-year college plans from SY 2005-2006 (Koerner 2012). Though all of the southeast area schools have improved percentages of high school graduates with four-year college plans since SY 2005-06 data, none of the area schools matched the percentages of Maryland or Baltimore County in SY 2010-11.

Eastern Technical, which was the highest performer in the southeast area in both years studied and was the only school to improve its four-year college plans percentage by more than 10 percentage points, is a pure magnet and National Blue Ribbon high school. The most academically qualified applicants are chosen to attend Eastern Technical, but some of the curriculum tracks educate students for technical fields that do not require four-year college degrees (MSDE 2006b, 2011b).

In addition, Baltimore County schools have begun using Advancement Via Individual Determination (AVID) and College Board, an initiative to better prepare students for college from middle school forward. The program begins with CollegeEd in grade 7, which allows students to explore career choices. This is followed by free standardized practice tests, AP courses and dual-credit options in high school. In 2011, 95 percent of the students who were participants in AVID and College Board applied to colleges and universities (BCPS 2013c).

Chapter Five: Juvenile Crime Indicators
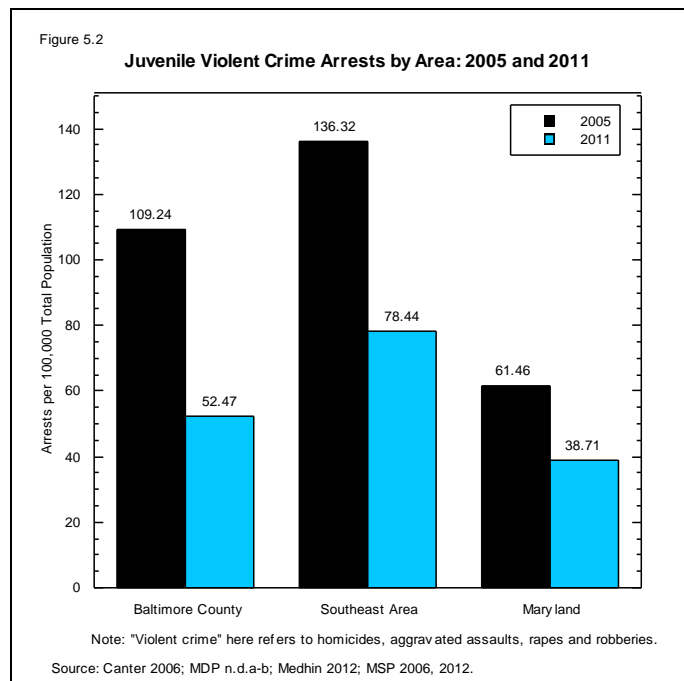
5.1 Introduction

The juvenile arrest data presented in this report include three categories of crime: violent crime, non-violent (property) crime and drug-related crime (figure 5.1). The juvenile crime indicators are measured by the number of juvenile arrests per 100,000 population. This differs from the crime statistics reported under adult and senior crime in Chapter Seven, which look at the number of reported incidents of crime. As with all arrest data, the number of juvenile arrests does not represent the number of individuals arrested but the total number of arrests, as one individual may be arrested several times. Juveniles that are arrested for multiple violations only have the most serious of those violations recorded on their arrest record (MSP 2012). Although this means that all arrests may not be represented, the number of arrests not recorded can be assumed to be small, since these "missing" arrests are due to multiple charges at the same time.

Figure 5.1	
Priority Areas and Indicators for Juvenile Crime	
Priority Area	**Selected Indicator**
Juvenile crime	Juvenile arrests, violent crime
	Juvenile arrests, non-violent crime
	Juvenile arrests, drug-related

Nationally, there have been declines in the number of persons arrested under the age of 18 for all crime indicators studied here. Between the years of 2007 and 2011, the number of juvenile arrests for violent crimes fell by 30.9 percent and arrests for property crime fell by 20.2 percent. Juvenile arrests for drug abuse offenses in the U.S. also fell by 23.5 percent from 2007 to 2011 (FBI 2012a).

5.2 Juvenile Arrests: Violent Crimes

Violent crime in this report refers to four offenses: homicide, aggravated assault, rape and robbery. Aggravated assaults are considered a felony crime and usually involve the use of a weapon. As seen in figure 5.2, there were declines in the rates of juvenile violent crime arrests in Maryland, Baltimore County and the southeast area between 2005 and 2011. In Baltimore County, the rate fell from 109.24 to 52.47 arrests per 100,000 total population, representing a decline of 56.77 arrests per 100,000 total population over the studied period. Despite having the highest rate in 2011, the southeast area showed the greatest decrease in juvenile violent crime arrests — the rate fell from 136.32 to 78.44 arrests per 100,000 total population, for a decline of

Figure 5.2

Juvenile Violent Crime Arrests by Area: 2005 and 2011

Note: "Violent crime" here refers to homicides, aggravated assaults, rapes and robberies.
Source: Canter 2006; MDP n.d.a-b; Medhin 2012; MSP 2006, 2012.

57.88 arrests between 2005 and 2011. The rate of juvenile violent crime arrests in Maryland fell by 22.75 arrests per 100,000 total population, from 61.46 to 38.71 arrests from 2005 to 2011. This was the smallest decline in the three studied areas, but the state had the lowest violent crime arrest rate among the observed areas in both 2005 and 2011 (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).

Figure 5.3

Juvenile Violent Crime Arrests by ZIP Code: 2005 and 2011

Note: "Violent crime" here refers to aggravated assaults, rapes, robberies and homicides.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012; MSP 2006, 2012.
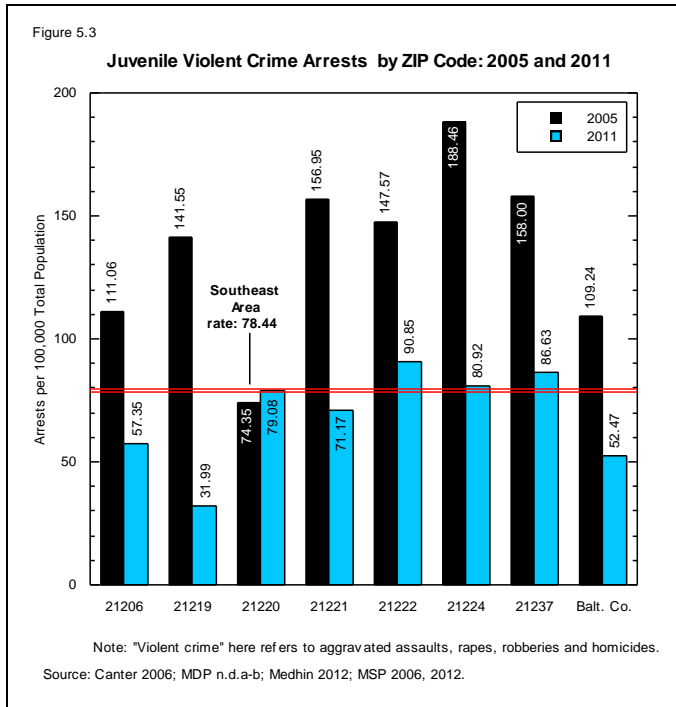
Looking to the southeast area (figure 5.3), the rates of juvenile violent crime arrests generally followed the national trend of decline between 2005 and 2011. ZIP code 21222 showed the highest rate of juvenile violent crime arrests in 2011, at 90.85 arrests per 100,000 total population. This was followed by ZIP codes 21237, with 86.63 arrests per 100,000 population; 21224, with 80.92 arrests per 100,000 population; 21220, with 79.08 arrests per 100,000 popul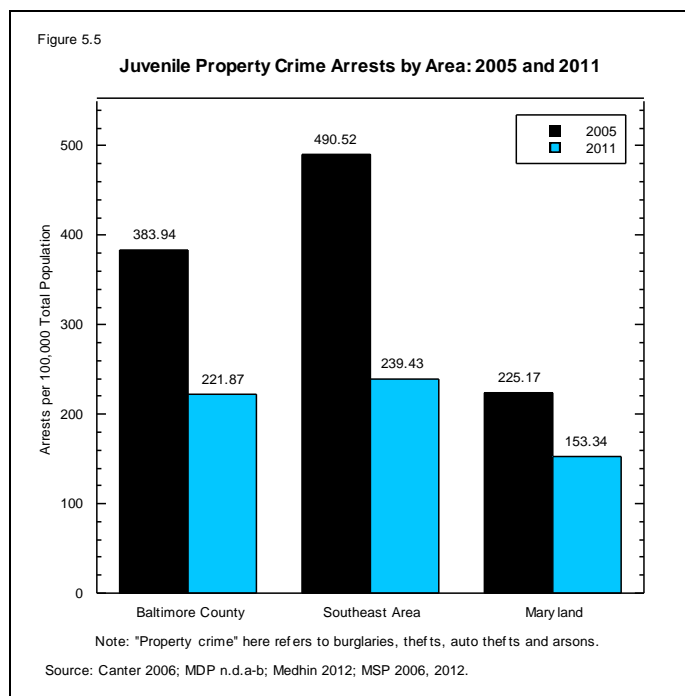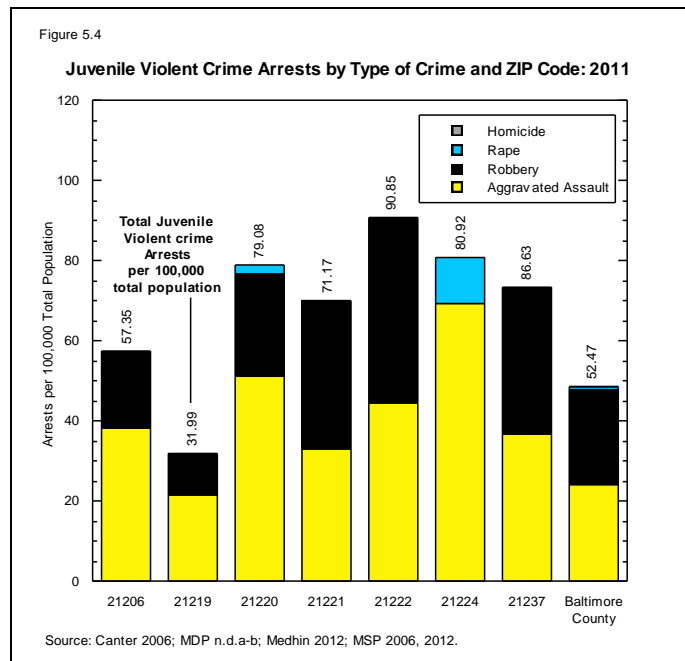ation; 21221, with 71.17 arrests per 100,000 population; and 21206, with 57.35 arrests per 100,000 population. ZIP code 21219 had the lowest rate of juvenile violent crime arrests at 31.99 arrests per 100,000 population in 2011, which is approximately 2.84 times lower than the rate seen in 21222. Six of the seven southeast area ZIP codes showed decreases in juvenile arrests for violent crimes. The only ZIP code to see an increase in arrests was 21220, where a small increase of 4.73 arrests per 100,000

population was observed (from 74.35 in 2005 to 79.08 arrests per 100,000 population in 2011). Of the six ZIP codes that showed declining rates, Sparrows Point (21219) experienced the largest drop in juvenile arrests for violent crimes, declining by 109.56 arrests per 100,000 population (from 141.55 to 31.99 arrests per 100,000 population). This represents a 2011 arrest rate that was approximately 4.42 times less than its 2005 rate. The next largest decline was seen in Eastpoint (21224), which showed a 107.54 drop in arrests per 100,000 population (from 188.46 to 80.92 arrests per 100,000 population). Smaller, but still significant, declines were seen in Essex (21221), with a decline of 85.78 arrests per 100,000 population (from 156.95 to 71.17 arrests per 100,000 population); Rosedale (21237), with a decline of 71.37 arrests per 100,000 population (from 158.00 to 86.63 arrests per 100,000 population); Dundalk (21222), with a decline of 56.72 arrests per 100,000 population (from 147.57 to 90.85 arrests per 100,000 population); and Overlea (21206), with a decline of 53.71 arrests per 100,000 population (from 111.06 to 57.35 arrests per 100,000 population) (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).

Figure 5.4 explores 2011 juvenile violent crime arrests in the southeast area by type of offense. The most common type of violent crime perpetrated by juveniles in the southeast area was aggravated assault, followed by robberies and rapes. There were no homicides with juvenile arrests in the southeast area during 2011. Within the southeast area, Eastpoint (21224) had the highest rates of aggravated assault arrests at 69.36 arrests per 100,000 total population. The Eastpoint area also had the highest number of reported aggravated assaults, as discussed in Chapter Seven. The Eastpoint rate was followed by those of Middle River (21220), at 51.02 arrests per 100,000 population; Dundalk (21222), at 44.50 arrests per 100,000 population; Overlea (21206), at 38.23 arrests per 100,000 population; Rosedale (21237), at 36.65 arrests per 100,000 population; and Essex (21221), at 33.00 arrests per 100,000 population. The area with the smallest number of aggravated assaults was Sparrows Point (21219), which had a rate of 21.32 arrests

per 100,000 population in 2011 and was the only ZIP code within the southeast area to have a rate lower than that of Baltimore County (23.95 arrests per 100,000 population) (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).

Robberies were the next most perpetrated crime in terms of juvenile arrests, with Dundalk (21222) showing the highest rates of arrests in 2011, with 46.35 arrests per 100,000 total population (figure 5.4). This was followed by the rates in Essex (21221), at 36.96 arrests per 100,000 population; Rosedale (21237), at 36.64 arrests per 100,000 population; and Middle River (21220), at 25.51 arrests per 100,000 population. Overlea (21206) and Sparrows Point (21219) had the lowest rates of juvenile arrests for robberies in the southeast area in 2011, at 19.12 and 10.66 arrests per 100,000 population, respectively. These ZIP codes had rates lower than Baltimore County's 23.95 arrests per 100,000 population rate. Notably, Eastpoint (21224) had no juvenile arrests for robberies in 2011. Rapes were the least perpetrated violent crime with juvenile arrests in the southeast area in 2011, with only two ZIP codes reporting juvenile arrests. Comparatively, Eastpoint (21224) had a high rate of arrests for rape, with 11.56 arrests per 100,000 population, while the Baltimore County rate for this offense was only 0.49 arrests per 100,000 population. This suggests that Eastpoint may have been a large contributor to the juvenile rape arrest rate of the county overall. The only other ZIP code in the southeast area reporting juvenile arrests for this crime in 2011 was Middle River (21220), which had 2.55 arrests per 100,000 population. There were no arrests for rapes involving juvenile perpetrators in the 21206, 21219, 21221, 21222 or 21237 ZIP codes (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).

Figure 5.4

Juvenile Violent Crime Arrests by Type of Crime and ZIP Code: 2011

Source: Canter 2006; MDP n.d.a-b; Medhin 2012; MSP 2006, 2012.

Figure 5.5

Juvenile Property Crime Arrests by Area: 2005 and 2011

Note: "Property crime" here refers to burglaries, thefts, auto thefts and arsons.
Source: Canter 2006; MDP n.d.a-b; Medhin 2012; MSP 2006, 2012.

5.3 Juvenile Arrests: Non-violent Crimes

The terms "property crime" or "non-violent crime" encompass four offenses: thefts, burglaries, motor vehicle thefts and arsons. As seen in figure 5.5, the rates of juvenile property crime arrests have declined significantly in all studied areas between 2005 and 2011 data. The largest decline occurred in the southeast area, where the rate of juvenile property crime arrests fell by 251.09 arrests per 100,000 total population, from 490.52 per 100,000 population in 2005 to 239.43 in 2011. In Baltimore County, the rate of juvenile property crime arrests fell from 383.94 in 2005 to 221.87 per 100,000 population in 2011, representing a decline of 162.07 arrests per 100,000 population. The rate of juvenile property crime arrests in Maryland showed the smallest decline of the three areas, falling from 225.17 to 153.34 per 100,000 population, or a decline of 71.83 arrests per 100,000 population. The southeast area had the highest rate of juvenile property crime arrests in both 2005 and 2011, despite experiencing the largest decline of the three areas being studied (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).

Figure 5.6

Juvenile Property Crime Arrests by ZIP Code: 2005 and 2011

Note: "Property crime" here refers to burglaries, thefts, auto thefts and arsons.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012; MSP 2006, 2012.
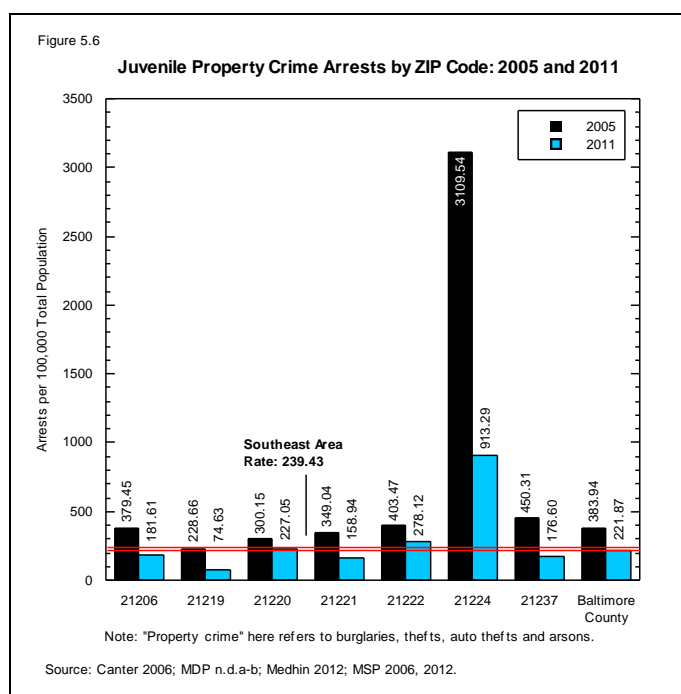
There were declines in property crime rates in all seven ZIP codes of the southeast area from 2005 to 2011 (figure 5.6). The 21224 ZIP code had the highest rate of juvenile property crime arrests in 2011, at 913.29 arrests per 100,000 population. This rate was 3.28 times higher than the next highest rate seen in ZIP code 21222 (278.12 arrests per 100,000 population) for the same year. These rates were followed by lower rates in the remaining ZIP codes of the southeast area: 21220 (227.05 arrests per 100,000 population); 21206 (181.61 arrests per 100,000 population); 21237 (176.60 arrests per 100,000 population); 21221 (158.94 arrests per 100,000 population); and 21219 (74.63 arrests per 100,000 population). Two ZIP codes — 21222 and 21224 — showed rates of juvenile property crime above the average for the southeast area (239.43 arrests per 100,000 population) in 2011. The juvenile arrest rate in 21224 was approximately 3.82 times higher than the southeast area rate (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).

Despite having the highest rate of juvenile property crime arrests in 2011, the 21224 ZIP code saw the largest decline in this rate between 2005 and 2011, with a decrease of 2,196.21 arrests per 100,000 population, dropping from 3,109.50 to 913.29 arrests per 100,000 population (figure 5.6) (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012). The 21224 ZIP code, which has exhibited high rates of juvenile violent and property crimes, makes up a relatively large geographical area and has a large juvenile population. Representatives of the Baltimore County Police Department point out that since most juveniles lack transportation, the majority of juvenile offenders commit crimes in the ZIP code of their residence. The Eastpoint Mall in the 21224 ZIP code was historically the source of many thefts involving juvenile offenders. However, with economic declines in the past six years, there has been a reduction of

activity at the mall, and it is not as popular with the juvenile population as in years past (Brown, Howard and Metzger 2012). The next largest decline in juvenile non-violent crime arrests was seen in 21237, which had a reduction of 273.71 arrests per 100,000 total population, from 450.31 to 176.60 arrests per 100,000 population. Other southeast area ZIP codes saw declines in juvenile non-violent crimes from 2005 to 2011 as follow: 21206, with a 197.84 arrests per 100,000 population decline (from 379.45 to 181.61 arrests per 100,000 population); 21221, with a decline of 190.10 arrests per 100,000 population (from 349.04 to 158.94 arrests per 100,000 population); 21219, with a 154.03 arrests per 100,000 population decrease (from 228.66 to 74.63 arrests per 100,000 population); and 21222, with a 125.35 arrests per 100,000 population decrease (from 403.47 to 278.12 arrests per 100,000 population). The smallest decrease in arrest rate from 2005 to 2011 for juvenile non-violent crime was seen in ZIP code 21220, with a decrease of 73.10 arrests per 100,000 population (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).

When the juvenile property crime arrests are broken down by ZIP code and type of offense (see figure 5.7), it is evident that thefts were the most predominant violation in all seven ZIP codes of the southeast area. The 21224 ZIP code had the highest rate of arrests for thefts involving juvenile offenders in 2011 (901.73 arrests per 100,000 total population), followed by 21222 (196.73 arrests per 100,000 population), 21220 (183.68 arrests per 100,000 population), 21237 (143.28 arrests per 100,000 population) and 21206 (133.82 arrests per 100,000 population). ZIP codes 21221 and 21219 had the lowest rates of juvenile arrests for thefts in 2011 at 113.87 and 42.65 arrests per 100,000 population, respectively. The second most common of these crimes in the southeast area was burglary, and the 21222 ZIP code had the highest rate for this crime at 61.19 arrests

Figure 5.7

Juvenile Property Crime Arrests by Type of Crime and ZIP Code: 2011

Legend: Burglaries; Thefts; Auto Thefts; Arsons

Y-axis: Per 100,000 Total Population (0, 200, 400, 600, 800, 1000)

Total Juvenile Property crime Arrests per 100,000 population

Values by ZIP code: 21206: 181.61; 21219: 74.63; 21220: 227.05; 21221: 158.94; 21222: 278.12; 21224: 913.29; 21237: 176.60; Baltimore County: 221.87

Source: Canter 2006; MDP n.d.a-b; Medhin 2012; MSP 2006, 2012.

per 100,000 population. ZIP codes 21206, with 38.23 arrests per 100,000 population; 21221, with 35.58 arrests per 100,000 population and 21220, with 33.16 arrests per 100,000 population, followed this rate. Three ZIP codes had juvenile burglary arrest rates lower than Baltimore County's rate of 28.40 arrests per 100,000 population in 2011: 21237, at 23.32 arrests per 100,000 population; 21224, at 11.56 arrests per 100,000 population; and 21219, at 10.66 arrests per 100,000 population (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).
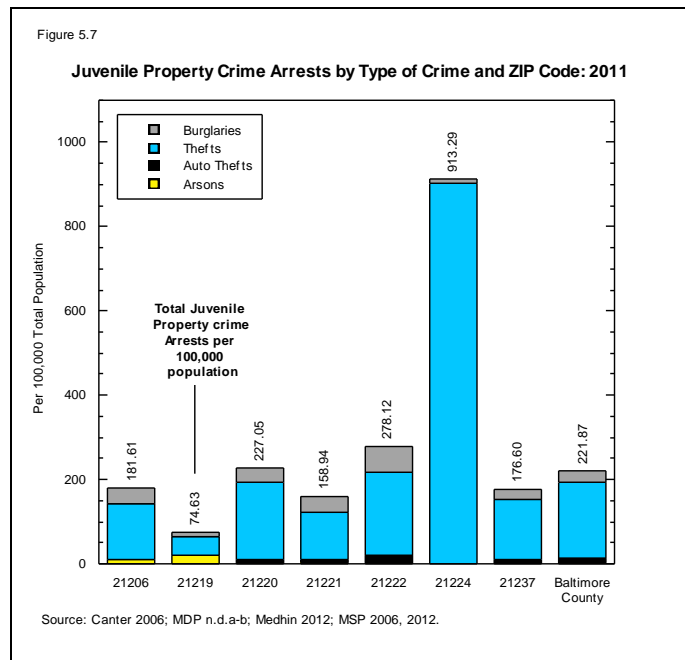
Arsons and motor vehicle thefts were the two least frequently committed non-violent crimes with juvenile arrests in the southeast area (figure 5.7). For arsons, the 21219 ZIP code had the highest rate of juvenile arrests at 21.32 arrests per 100,000 total population (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012). According to the Baltimore County Police Department, there was a significant increase in arson offenses in the 21219 ZIP code in 2011, which included fires set in garages, trashcans, churches and motor vehicles. This likely contributed to the increase in juvenile arrests for that ZIP code (Brown, Howard and Metzger 2012). The 21206 ZIP code had a juvenile arson rate that was less than half of that of 21219, at 9.56 arrests per 100,000 population in 2011. This rate halved again in 21221, with a rate of 4.74 arrests per 100,000 population. Among ZIP codes reporting juvenile arson arrests in 2011, the lowest rates were observed in 21222, at 3.71 arrests per 100,000 population, and 21220, at 2.55 arrests per
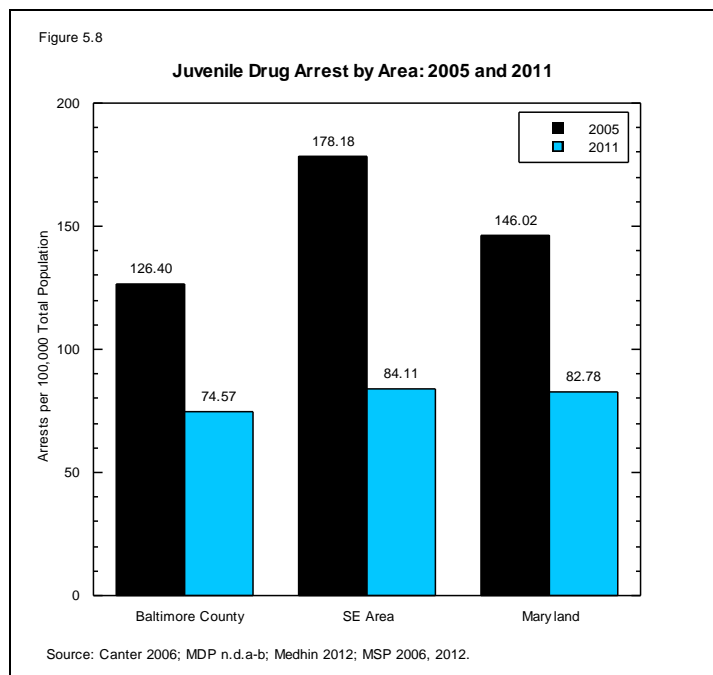
72

100,000 population. No juvenile offenders were arrested in 21224 or 21237 for arson. Motor vehicle thefts were the least of the property crime offenses for which juveniles were arrested in 2011. Four ZIP codes experienced juvenile arrests in this category: 21222, at 16.69 arrests per 100,000 population; 21237, at 10.00 arrests per 100,000 population; 21220, at 7.65 arrests per 100,000 population; and 21221, at 4.74 arrests per 100,000 population. There were no arrests of juvenile offenders in 2011 for motor vehicle thefts in the 21206, 21219 and 21224 (Canter 2006; MDP n.d, a-b; Medhin 2012; MSP 2006, 2012).

Statewide, several initiatives have recently been implemented that may have affected the rates of juvenile arrests. In Baltimore County, there is one restorative justice program, Juvenile Offenders in Need of Supervision (JOINS), which focuses on first-time non-violent juvenile offenders in an effort to divert juveniles from further contact with the criminal justice system. Restorative justice encourages the offender to take responsibility for his or her actions and to make amends to the victim(s) of the crime. The JOINS program connects youth with programs that attempt to address the underlying issues that may influence their criminal activity, such as anger management and substance abuse. Ninety-two percent of participating juveniles have not had further contact with the police up to a year after completing the JOINS program (Metzger 2012).

5.4 Juvenile Arrests: Drug-related Crimes

The juvenile arrest data presented in this report do not portray a complete picture of the number of juveniles that participate in the drug lifestyle. Research shows that "participation in high-risk or illicit behaviors can have immediate and long-term negative effects on the overall development and well-being of youth, their families and our society" (Wallman 2012). This indicator, as with all other youth indicators, are part of a larger picture — interactions with illicit drugs can lead to other risky behaviors such as tobacco use, engaging in sexual activity and participating in violent crime (Wallman 2012). Conversations with members of the Baltimore County Police Department reveal that drug arrests remain fairly stable due to the nature of the addictions that drive these crimes. There has also been the emergence of new, semi-legal substances, such as bath salts and synthetic marijuana (also known as "spice"), which the Baltimore County Police Department is addressing through a specialized task force (Brown, Howard and Metzger 2012).

As seen in figure 5.8, there were declines in the rates of juvenile drug arrests in the three studied areas — Baltimore County, the southeast area and Maryland — from 2005 to 2011. The rates of juvenile drug arrests were similar in the southeast area and Maryland in 2011, at 84.11 per 100,000 total population and 82.78 per 100,000 population, respectively. The rate of juvenile drug arrests in Baltimore County was the lowest of the three studied areas in 2011 (74.57 per 100,000 population). The southeast area had the greatest decline from 2005 to 2011 data, with a decline of 94.07 arrests per 100,000 population (from 178.18 per 100,000 population to 84.11 per 100,000 population). The rates of decline in Maryland and Baltimore County were relatively similar. Maryland had a 2005 to 2011 decline of 63.24 arrests per 100,000 population, from 146.02 per 100,000

Figure 5.8

Juvenile Drug Arrest by Area: 2005 and 2011

Source: Canter 2006; MDP n.d.a-b; Medhin 2012; MSP 2006, 2012.

population to 82.78 per 100,000 population, and Baltimore County experienced a decline of 54.83 arrests per 100,000 population, from 126.40 per 100,000 population to 74.57 per 100,000 population (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).
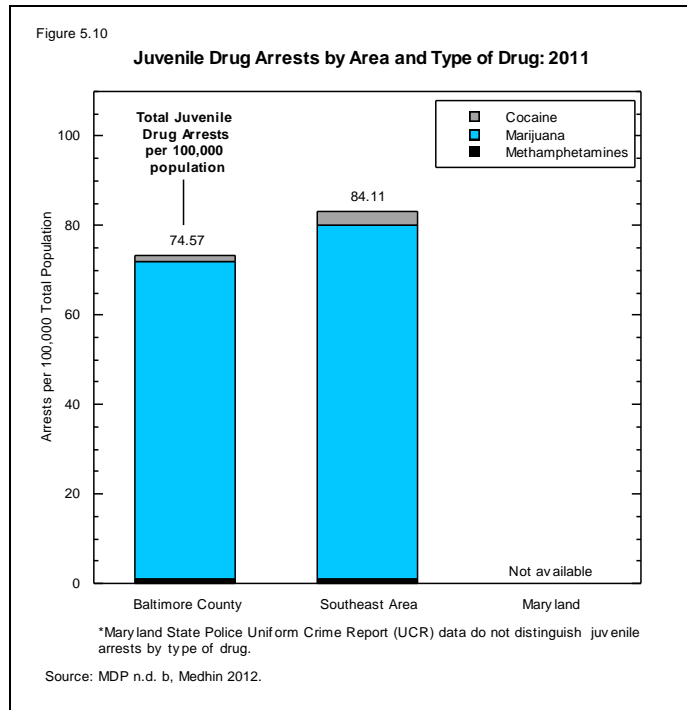
When looking at sales and possession arrests in the three studied areas in 2011 (figure 5.9), it becomes obvious that possession arrests were far more common than sales arrests for juveniles. The Maryland Uniform Crime Report (UCR) does not distinguish between juvenile drug arrests for sales and possessions, so these data are unavailable for Maryland (Medhin 2012). Arrests for juvenile drug sales were similar in Baltimore County and the southeast area, with rates of 5.93 and 5.68 arrests per 100,000 total population, respectively in 2011. Sales arrests were only slightly higher in Baltimore County than in the southeast area. The data of the two areas were opposite for 2011 possession arrests. The possession arrest rate of Baltimore County (68.65 arrests per 100,000 population) was lower than that of the southeast area (78.44 arrests per 100,000 population in 2011) (MDP n.d. b, Medhin 2012).

Figure 5.9

Juvenile Drug Arrests Type of Crime and Area: 2011

*Maryland State Police Uniform Crime Report (UCR) data do not distinguish between juvenile sales and possession.

Source: MDP n.d. b, Medhin 2012.
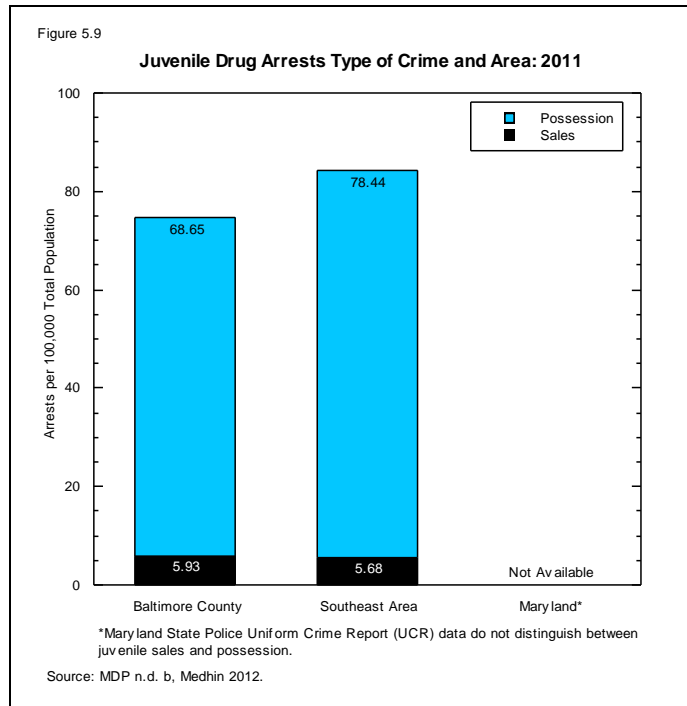
In viewing juvenile drug arrest rates by the type of drug associated with the arrests (figure 5.10), marijuana was the predominant drug found, followed by cocaine and methamphetamine. In the southeast area, the arrest rate for marijuana was 78.92 arrests per 100,000 total population, followed by cocaine-related arrests (3.10 arrests per 100,000 population) and methamphetamine (1.03 arrests per 100,000 population). The Baltimore County rates for all three substances were lower than the southeast area rates. The county rate for marijuana-related arrests in 2011 was 71.12 arrests per 100,000 population, followed by cocaine (1.23 arrests per 100,000 population) and methamphetamine (0.99 arrests per 100,000 population). These data were not available for Maryland (MDP n.d. b, Medhin 2012).

Figure 5.10

Juvenile Drug Arrests by Area and Type of Drug: 2011

*Maryland State Police Uniform Crime Report (UCR) data do not distinguish juvenile arrests by type of drug.

Source: MDP n.d. b, Medhin 2012.

Figure 5.11

Juvenile Drug Arrests* by ZIP Code: 2005 and 2011

*Combined rates for possession and sales offenses.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.
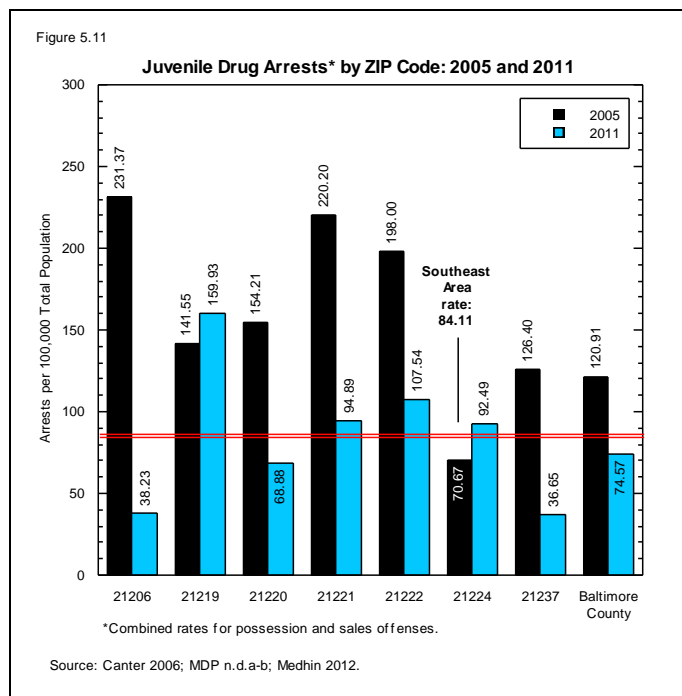
Within the southeast area, the combined rate of juvenile drug arrests varied by ZIP code between 2005 and 2011 (figure 5.11). ZIP code 21219 had the highest rate of juvenile drug arrests in 2011, with a rate of 159.93 arrests per 100,000 total population. This was followed by the rates of ZIP codes 21222 (107.54 arrests per 100,000 population), 21221 (94.89 arrests per 100,000 population), 21224 (92.49 arrests per 100,000 population) and 21220 (68.88 arrests per 100,000 population). ZIP codes 21206 and 21237 had relatively low drug-related juvenile arrests in 2011, at 38.23 and 36.65 arrests per 100,000 population, respectively. Between 2005 and 2011, the biggest decrease in juvenile drug arrests was seen in ZIP code 21206, which had a decrease of 193.14 arrests per 100,000 population, from 231.37 to 38.23 arrests per 100,000 population. Declines in juvenile arrest rates were also seen in 4 other ZIP codes: 21221, which had a decline of 125.31 arrests per 100,000 population (from 220.20 to 94.89 arrests per 100,000 population); 21222, with a decline of 90.46 arrests per 100,000 population (from 198.00 to 107.54 arrests per 100,000 population); 21237, with a decline of 89.75 arrests per 100,000 population (from 126.40 to 36.65 arrests per 100,000 population); and 21220, with a decline of 85.33 arrests per 100,000 population (from 154.21 to 68.88 arrests per 100,000 population). Two ZIP codes — 21219 and 21224 — saw increased rates of drug-related juvenile arrests from 2005 to 2011, with increases of 18.38 arrests per 100,000 population and 21.82 arrests per 100,000 population, respectively (Canter 2006; MDP n.d. a-b; Medhin 2012).
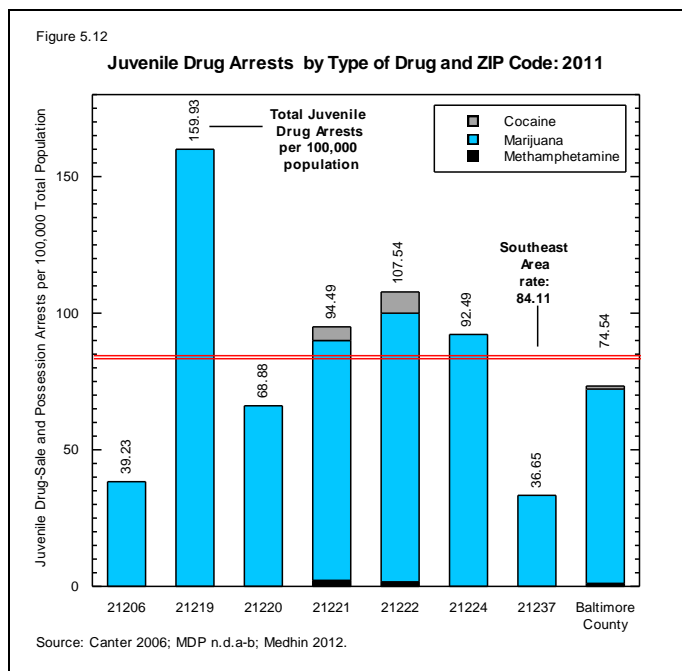
Finally, this report examines southeast area juvenile drug arrests by the type of drug involved (figure 5.12). Within all seven ZIP codes of the southeast area, marijuana was the main (and in some cases the only) illicit substance involved in the juvenile drug arrests in 2011. In ZIP code 21219, all juvenile arrests were marijuana-related, with a rate of 159.93 arrests per 100,000 total population. This rate was the highest in the southeast area for marijuana related arrests in 2011. The next highest rate of marijuana-related arrests was observed in 21222, at 98.27 arrests per 100,000 population. Marijuana arrest rates in ZIP codes 21224 (92.49 arrests per 100,000 population), 21221 (87.77 arrests per 100,000 population) and 21220 (66.33 arrests per

Figure 5.12

Juvenile Drug Arrests by Type of Drug and ZIP Code: 2011

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

100,000 population) followed. ZIP codes 21206 and 21237 had the fewest marijuana-related juvenile drug arrests, with 38.23 and 33.32 arrests per 100,000 population, respectively. Only two ZIP codes — 21222 and 21221 — had juvenile drug arrests involving cocaine. The 2011 cocaine arrest rates in ZIP codes 21222 and 21221 were 7.42 and 4.74 arrests per 100,000 population, respectively. These ZIP codes were also the only ones to observe any methamphetamine-related arrests, with a rate of 2.37 arrests per 100,000 population in ZIP code 21222 and 1.85 arrests per 100,000 population in ZIP code 21221. There were no juvenile arrests for cocaine or methamphetamine in the 21206, 21219, 21220, 21224 or 21237 ZIP codes in 2011 (Canter 2006; MDP n.d. a-b; Medhin 2012).

Chapter Six: Health, Welfare and Housing Indicators

6.1 Introduction

The Task Force has defined several indicators that look at health, welfare and housing. In the health category, the Task Force narrowed its focus to access of care and the occurrence of preventable illness through the following indicators: (1) MedStar Franklin Square Medical Center's uncollected billing, (2) deaths from heart disease, (3) deaths from cancer and (4) deaths from diabetes. In an attempt to assess the subject of welfare, the following indicators were studied (1) Supplemental Security Income (SSI) recipiency and (2) public-assistance-income recipiency. Housing examines three indicators: (1) homeownership, (2) Section 8 housing availability and (3) Section 8 housing waitlist (figure 6.1).
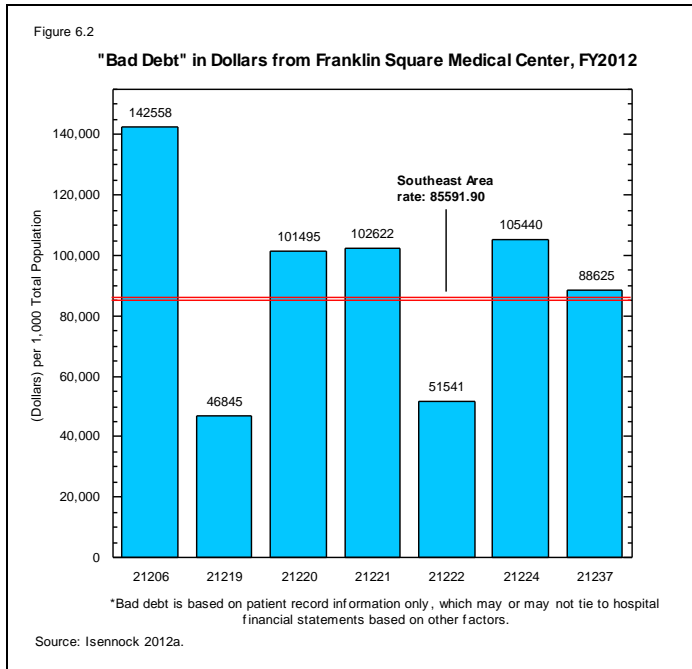
Figure 6.1	
Priority Areas and Indicators for Health and Welfare	
Priority Area	**Selected Indicator**
Health	MedStar Franklin Square Medical Center's (MSFSMC) uncollected billing
	Deaths from heart disease
	Deaths from cancer
	Deaths from diabetes
Welfare	Supplemental Security Income (SSI) recipiency
	Public-assistance-income recipiency
Housing	Homeownership
	Section 8 housing availability
	Section 8 housing waitlist

6.2 Health Indicators

Health can be defined in many ways. On an individual level, healthy outcomes may include the ability to practice healthy behaviors and avoid disease. Access and affordability of care, insurance coverage and availability of specialty care all directly influence an individual's health. Other external influences indirectly affect health outcomes: education, employment, discrimination and environmental factors can limit or expand the ability of an individual to be healthy.

6.2.1. MedStar Franklin Square Medical Center's Bad Debt and Charity Care

Bad debt and charity care are data collected internally from MedStar Franklin Square Medical Center and are used as a proxy measure of the uninsured population in the southeast area. Unfortunately, these data are not comparable to the data presented in the previous report. The "bad debt" data presented in this report represent the dollar amount of the bills incurred in all departments of MedStar Franklin Square that have not been paid, while the previous report's data represented a percentage of patients that could not pay. Bad debt is based on patient record information only, which may or may not tie to hospital financial statements based on other factors. These data do not represent a regular calendar year, but rather the 2012 fiscal year, which spans from July 1, 2011 to June 30, 2012 for the hospital. Charity care at MedStar Franklin Square is a program by which free or reduced cost medically necessary care is offered to individuals who meet certain financial criteria. MedStar Franklin Square Medical Center meets or exceeds legal requirements by providing free care to those individuals in households below 200 percent of the federal poverty level and reduced cost-care up to 400 percent of the federal poverty level (Isennock 2012b).

Figure 6.2

"Bad Debt" in Dollars from Franklin Square Medical Center, FY2012

Southeast Area rate: 85591.90

*Bad debt is based on patient record information only, which may or may not tie to hospital financial statements based on other factors.

Source: Isennock 2012a.

As figure 6.2 shows, the average bad debt in the southeast area in FY 2012 was $85,591.90 per 1,000 population. The 21206 ZIP code had the highest rate of bad debt within the southeast area, at a rate of $142,558 per 1,000 population. The rates of bad debt were fairly similar in the 21224, 21221 and 21220 ZIP codes, at rates of $105,440 per 1,000 population, $102,622 per 1,000 population and $101,495 per 1,000 population, respectively. The 21237 ZIP code had a rate of bad debt that was closest to the average rate in the southeast area ($88,625 per 1,000 population). Two ZIP codes, 21219 and 21222, experienced rates of bad debt that were lower than the average rate in the southeast area, at $46,845 per 1,000 and $51,541 per 1,000, respectively. Five ZIP codes — 21206, 21220, 21221, 21224 and 21237 — had rates of bad debt that were higher than the average rate in the southeast area ($85,591.90 per 1,000 population) (Isennock 2012b).

Figure 6.3

Charity Care in Dollars from Franklin Square Medical Center, FY2012

Southeast Area rate: 46533.60

Source : Isennock 2012a.
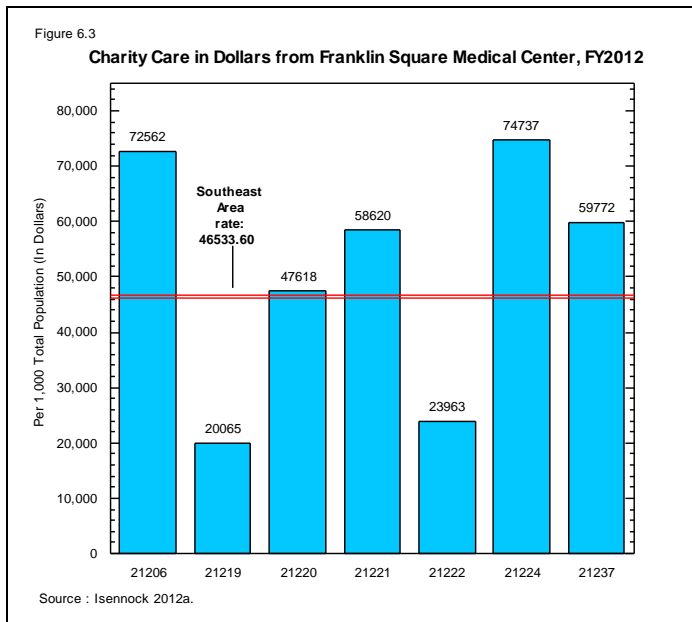
The trends within the southeast area with regards to the rates of charity care are similar to the rates of bad debt (figure 6.3). In FY 2012, the 21224 ZIP code had the highest rate of charity care (at a rate of $74,737 per 1,000 population), followed closely by the 21206 ZIP code ($72,562 per 1,000 population). The 21237 ZIP code ($59,772 per 1,000 population), the 21221 ZIP code ($58,619 per 1,000 population) and the 21220 ZIP code ($47,618 per 1,000 population) had the next highest rates of charity care. The 21222 and 21219 ZIP codes had the lowest rates of charity care, $23,963 per 1,000 population and $20,065 per 1,000 population, respectively. Five ZIP codes — 21224, 21206, 21220, 21221 and 21237 — had rates of charity care that were higher than the average rate of charity care in the southeast area ($46,533.60 per 1,000

population). The 21219 and 21222 ZIP codes had rates of charity care that were lower than the average rate in the southeast area. The ZIP codes with higher than average charity care for the southeast area were the same ones with higher than average bad debt (Isennock 2012a). When compared with the poverty data presented in Chapter Two of this report, most of these data are to be expected. However, the relatively low rates of bad debt and charity care for ZIP code 21222 are particularly interesting because this ZIP

code also has the lowest median income and most residents earning under $10,000 annually of any of the southeast area ZIP codes (CB 2013; MDP 2013a-b).

6.2.2. Deaths from Heart Disease

The leading cause of death in the United States and Maryland is heart disease. This disease accounts for 600,000 U.S. deaths annually, the equivalent of 24.6 percent of all deaths nationwide (Kochanek, Xu, Murphy, Miniño and Kung 2011). Maryland, Baltimore County, and the southeast area all have heart disease death rates that are higher than the national average. Measured in deaths per 100,000 people from 2007-2009, Baltimore County saw 198.4, and the U.S. had 185.2 deaths from heart disease per 100,000 people (CDC n.d.). This data is not broken down to the ZIP code level, but we still know that the southeast area has a heart disease death rate percentage (at 25.9 percent) that is slightly higher than the national percentage (24.6 percent) (Kochanek, Xu, Murphy, Miniño and Kung 2011; Sommers 2012).

Figure 6.4 illustrates the percentages of deaths resulting from heart disease in the southeast area, Baltimore County and Maryland during two time periods (2000-2004 and 2005-2009). All deaths with heart disease listed as either the primary cause of death or as a contributing factor are included in these figures. As shown, all three areas have seen a decline in deaths from heart disease as a percentage of all deaths during the time periods included in this study. While all areas have experienced decline, the southeast area, which had the lowest percentage of heart disease deaths from 2000-2004 (27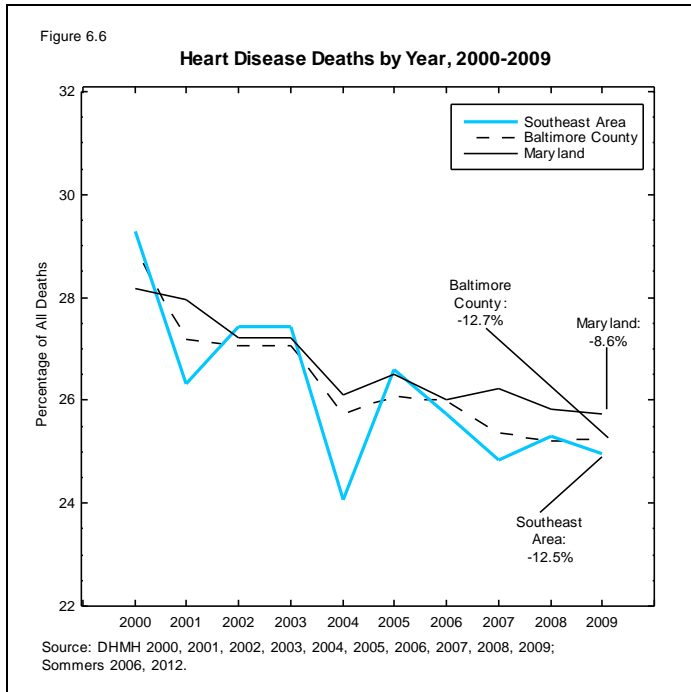.0 percent), had the highest percentage of heart disease deaths as a percentage of all deaths from 2005-2009 (25.9 percent). Baltimore County, the middle performer from 2000-2004 (27.2 percent), had the lowest heart disease death percentage of the observed areas from 2005-2009 (25.6 percent). Maryland, which had the highest percentage of heart disease related deaths from 2000-2004 (27.3 percent), was the middle performer from 2005-2009 (25.8 percent). Though the positioning of the highest and lowest percentages has shifted since the 2000-2004 time period, the heart disease death percentages in the observed areas have remained closely grouped together (DHMH 2000, 2001, 2002, 2003,

Figure 6.4
Heart Disease Deaths by Area: 2000 - 2004 and 2005 - 2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012.

Figure 6.5
Heart Disease Deaths by ZIP Code: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012.
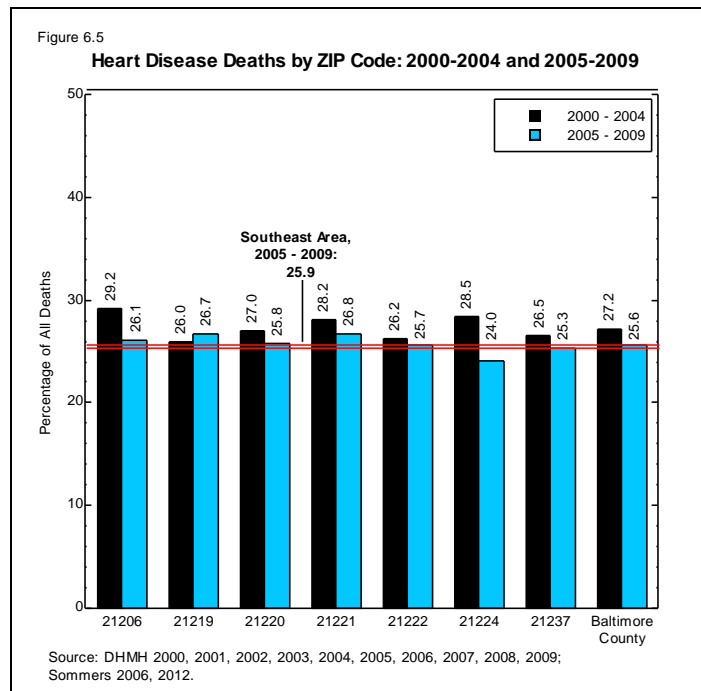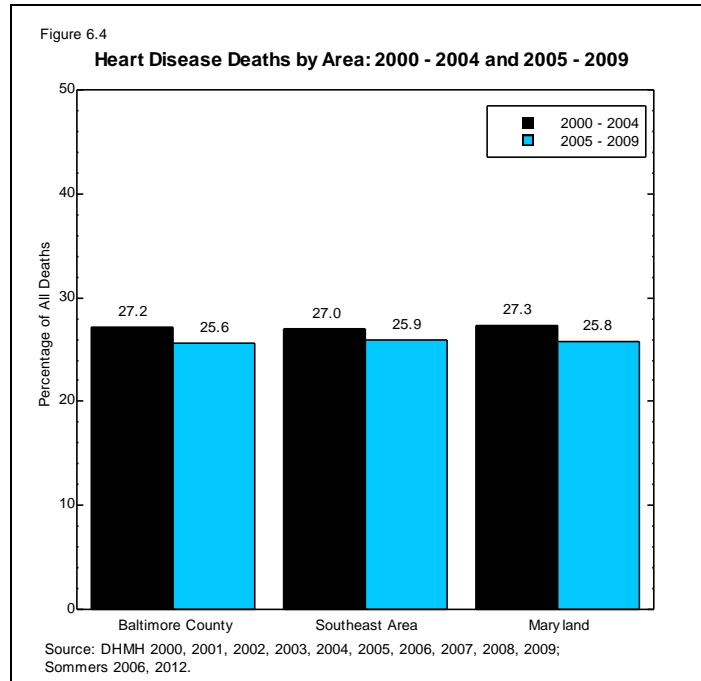
2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

In keeping with the previous graph, figure 6.5 demonstrates that the majority of southeast area ZIP codes experienced a decline in the percentage of deaths due to heart disease between 2000-2004 and 2005-2009. ZIP code 21219 (Sparrows Point) is the exception that saw an increase in heart disease death percentage (26.0 percent from 2000-2004 to 26.7 percent from 2005-2009). Two southeast area ZIP codes showed reductions of at least three percentage points: 21206 (from 29.2 to 26.1 percent) and 21224 (from 28.5 to 24.0 percent). The remaining ZIP codes experienced slight reductions of heart disease death percentages from the 2000-2004 period to the 2005-2009 period: 21220 (from 27.0 to 25.8 percent); 21221 (from 28.2 to 26.8 percent); 21222 (from 26.2 to 25.7 percent) and 21237 (from 26.5 to 25.3 percent). ZIP codes 21224 and 21237 are the only southeast area ZIP codes with percentages lower than that of Baltimore County (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Figure 6.6

Heart Disease Deaths by Year, 2000-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012.

By viewing the line graph of heart disease deaths in the southeast area, Baltimore County and Maryland from 2000-2009 (figure 6.6), it is apparent that all three areas have seen an overall rate decline since 2000, with intermittent years of increased rates. Since 2000, Baltimore County has seen the largest percentage decline, at 12.7 percent. This decline rate was followed by the southeast area, which experienced a similar decline of 12.5 percent, and by the state, which experienced a smaller decline of 8.6 percent over the period. Though it did not experience the largest overall decline in heart disease death percentages since 2000, the southeast area did have the lowest heart disease death percentage of the three areas for five of the years studied (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

6.2.3. Deaths from Cancer

Cancer is the second leading cause of death in the United States and Maryland, just behind heart disease (CDC 2012b:1, 11). According to 2009 data, Maryland ranked thirty-second among all states for cancer deaths per 100,000 people (NIH 2013a). Baltimore County had an average ranking among Maryland counties for cancer deaths, with a rate of 228.7 deaths per 100,000 population from 2005-2009 (NIH 2013b).

Due to a number of alarming health statistics in the U.S., the Centers for Disease Control and Prevention and the National Institutes of Health (NIH) implemented 10-year goals for certain health indicators in 2000. In the volume of these goals pertaining to currently available health data, "Healthy People 2010," Objective 3-1 is "Reduce the overall cancer death rate." This set a goal of 159.9 cancer deaths per 100,000 population by 2010 (HHS 2000:54). Unfortunately, Baltimore County, Maryland, and the United States all failed to meet this objective by the 2005-2009 data, with rates as follow: Baltimore County (228.7 deaths per 100,000 population); Maryland (184.1 deaths per 100,000 population); and the United States (178.7 deaths per 100,000 population). Conversely, two Maryland counties, Howard and Montgomery, did achieve this objective (NIH 2013b). The

Figure 6.7

Cancer Deaths by Area: 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012.

death rates per 100,000 population for cancer are not calculated at the ZIP code level, but the southeast area has a higher cancer death rate as a percentage of all deaths than the other observed areas. Progress is being made, though, as the percentages of cancer deaths in the southeast area and Baltimore County are recently trending downward (Sommers 2012).

Deaths due to cancer in the southeast area, Baltimore County, and Maryland over two time periods — 2000-2004 and 2005-2009 — are displayed in figure 6.7. This graph shows that Baltimore County and the southeast area experienced decreases in cancer death percentages as a percentage of all deaths since 2000-2004 data, while Maryland exhibited an increased rate since that time. Although it showed the largest decline in cancer deaths since the 2000-2004 data (26.0 to 24.5 percent), the southeast area still had the highest cancer death percentage of the three observed areas by the most recent data. Baltimore County, the middle performer in 2000-2004 data, had the lowest cancer death percentage of the three observed areas (24.0 percent to 23.3 percent) in 2005-2009. The state had the lowest percentage of deaths from cancer by 2000-2004 data, but it experienced a slight increase by 2005-2009 data (23.5 to 23.7 percent), making its percentage slightly higher than that of Baltimore County (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012). The declines shown by Baltimore County and the southeast area are on par with the recent national trend.
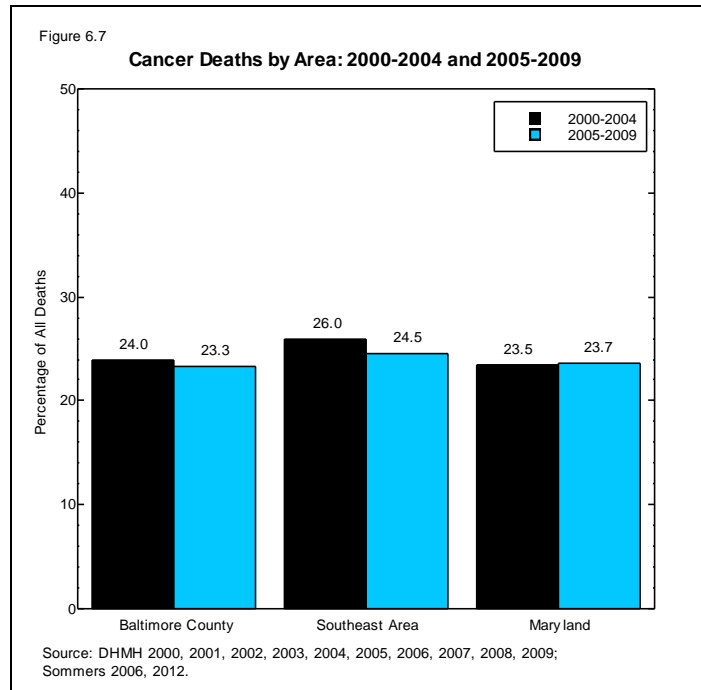
By taking a closer look at the southeast area as shown in figure 6.8, it is evident that there are some differences in the changes each of the ZIP codes experienced in cancer death percentages over time. Though the change was slight, ZIP code 21224, Eastpoint, was the one southeast area ZIP code that demonstrated an increase in its cancer death rate between 2000-2004 and 2005-2009 data (26.2 to 26.3 percent). Six southeast area ZIP codes experienced declines in cancer death rates from 2000-2004 data to 2005-2009 data: 21206 (23.3 to 21.8 percent), 21219 (29.8 to 24.8 percent), 21220 (26.4 to 24.5 percent), 21221 (25.7 to 23.0 percent), 21222 (26.1 to 25.7 percent) and 21237 (24.2 to 23.9 percent). In this timeframe, three ZIP codes — 21206, 21219 and 21221 — had cancer death rate declines of greater than two percentage points. The cancer death rates in ZIP codes 21219, 21222 and 21224 were higher than the overall southeast area, while ZIP codes 21206 and 21221 had cancer death rates lower than Baltimore County (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Figure 6.8

Cancer Deaths by ZIP Code, 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012.
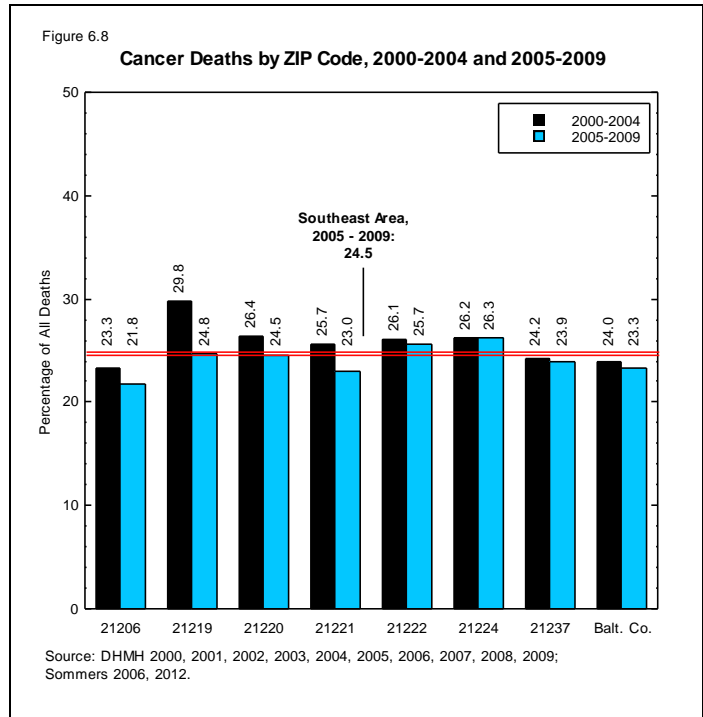
Figure 6.9 provides a better view of area progress with cancer death percentages by year from 2000 to 2009. By these data, Baltimore County and the southeast area both showed overall declines in cancer death percentages from 2000 to 2009. Baltimore County had an overall cancer death percentage decline of 1.8 percent, and the southeast area had an overall decline of 7.5 percent. Over the same 2000 to 2009 period, the state of Maryland experienced an overall cancer death percentage increase of 0.9 percent. The increase at the state level was predominantly the result of Maryland's 2008 cancer death rate, which was markedly higher than any other year. By 2009 data, the state rate was once again near previous numbers (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Figure 6.9

Cancer Deaths by Year, 2000-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012.
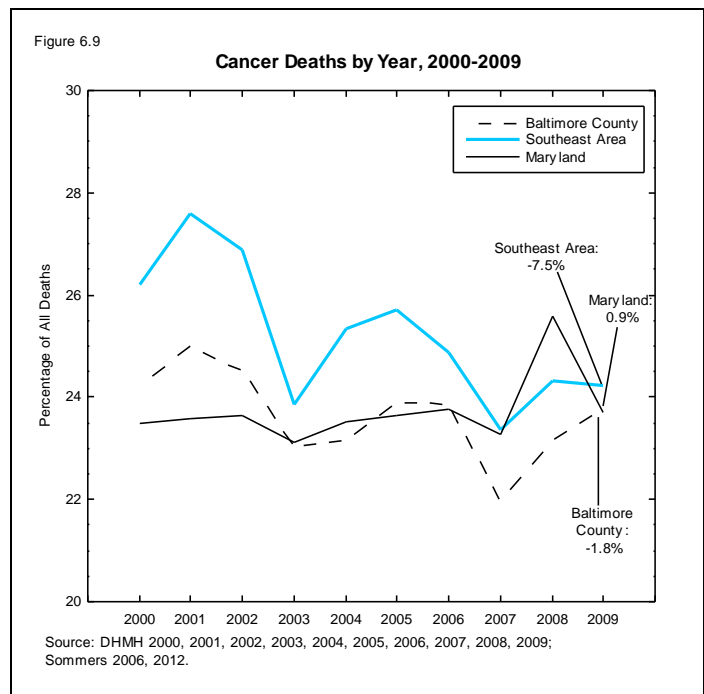
6.2.4. Deaths from Diabetes

Currently, diabetes impacts an estimated 25.8 million people (8.3 percent of the population) in the United States. Medical expenses for people with diagnosed diabetes are 2.3 times greater than those of people who do not have the disease. There are also millions of undiagnosed diabetics in the U.S., particularly among those age 45 and older (CDC 2012c:1, 7).

The state of Maryland's diabetes death rate is just below the national diabetes death rate per 100,000 population. However, Maryland ranks twenty-eighth nationally for diabetes death rate (KFF 2011). Overall, the southeast area and Baltimore County are performing better than the state in this category (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

In comparison to the U.S., Maryland performed better in the ethnicity/race categories by 2009 data. Still, the Maryland diabetes death rate for African-Americans was high (34.6 deaths per 100,000). By gender, Maryland had mixed results in comparison with the United States on diabetes death rates. Maryland had a lower diabetes death rate than the United States for females in 2009 (17.4 deaths per 100,000 in Maryland and 17.7 deaths per 100,000 in the U.S.), but Maryland did not perform as well in the male category of diabetes deaths (25.5 deaths per 100,000 in Maryland and 25.0 deaths per 100,000 in the U.S.) (KFF 2011). In figure 6.10, diabetes deaths as a percentage of all deaths can be viewed for the southeast area, Baltimore County and Maryland from 2000-2004 and 2005-2009. Baltimore County, which had the lowest diabetes death percentage in 2000-2004 data, experienced a slight rate decline by 2005-2009 data (2.7 to 2.5 percent) and maintained the lowest rate among the observed areas. The southeast area and Maryland also experienced diabetes death rate declines from 2000-2004 to 2005-2009 data: southeast area (3.1 to 2.9 percent) and Maryland (3.3 to 3.0 percent). Based on the 2005-2009 data, the southeast area was the middle performer and Maryland the low performer of the observed areas (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Figure 6.10

Diabetes Deaths by Area, 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012.
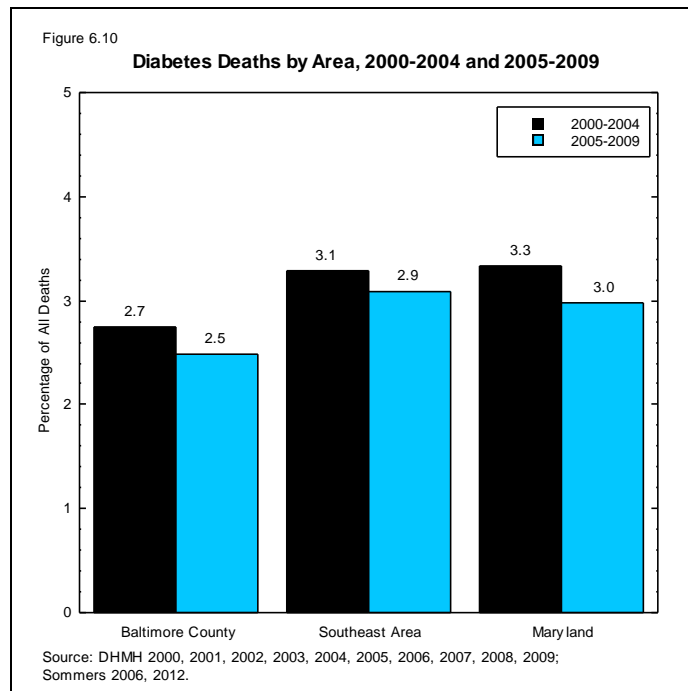
From figure 6.11, we see that diabetes death rates varied greatly among the ZIP codes of the southeast area during the 2000-2004 and 2005-2009 time periods observed. Four southeast area ZIP codes experienced declines in diabetes death rates since 2000-2004 data: 21206 (3.3 to 2.4 percent); 21220 (3.4 to 3.1 percent); 21222 (3.7 to 3.4 percent) and 21237 (3.0 to 2.4 percent). ZIP code 21206, Overlea, experienced the largest decline in diabetes death rate from 2000-2004 to 2005-2009 data, giving it the lowest death rate among the southeast area ZIP codes. The ZIP codes with the lowest diabetes death percentages — 21206 and 21237 — were the only southeast area ZIP codes with percentages lower than or on par with that of Baltimore County (2.5 percent). ZIP code 21221, Essex, maintained a steady diabetes death rate from 2000-2004 to 2005-2009 data at 3.0 percent. ZIP codes 21219 (Sparrows Point) and 21224 (Eastpoint) showed increases in diabetes death percentages from 1.8 to 3.0 percent
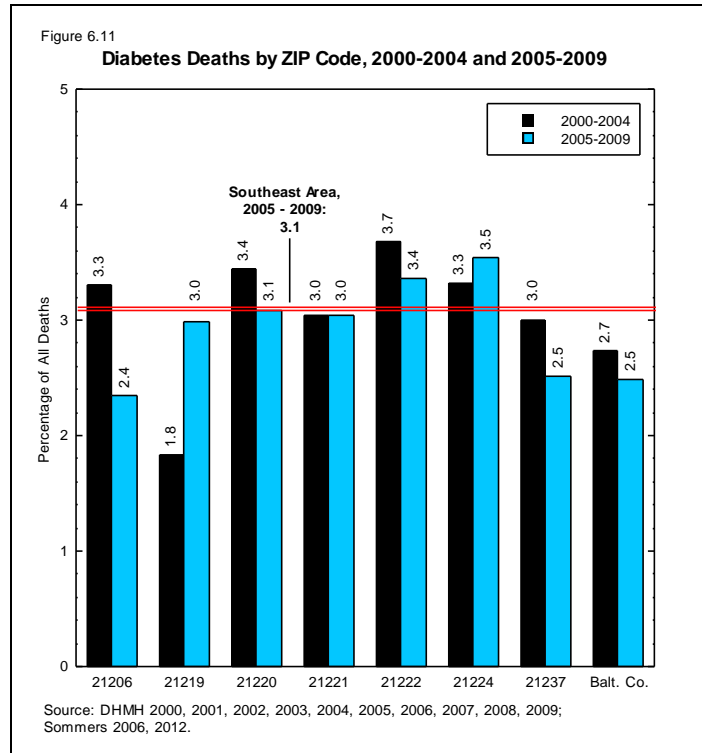
and 3.3 to 3.5 percent, respectively (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

By viewing diabetes death rate trends in figure 6.12, we see a bit of a different picture among changes over time in the southeast area, Baltimore County and Maryland. Baltimore County (3.9 percent decline) and Maryland (18.7 percent decline) both exhibited an overall decline in diabetes death percentage from 2000 to 2009. The southeast area did not perform as well, with an overall 0.3 percent increase in diabetes death percentage in the same time period. While the Baltimore County and Maryland diabetes death percentages saw years of spikes, the percentages for these two areas have remained in more of a pattern than those of the southeast area, which experienced multiple years of extreme percentage change (DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012).

Figure 6.11
Diabetes Deaths by ZIP Code, 2000-2004 and 2005-2009

Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012.

Figure 6.12
Diabetes Deaths by Year, 2000-2009

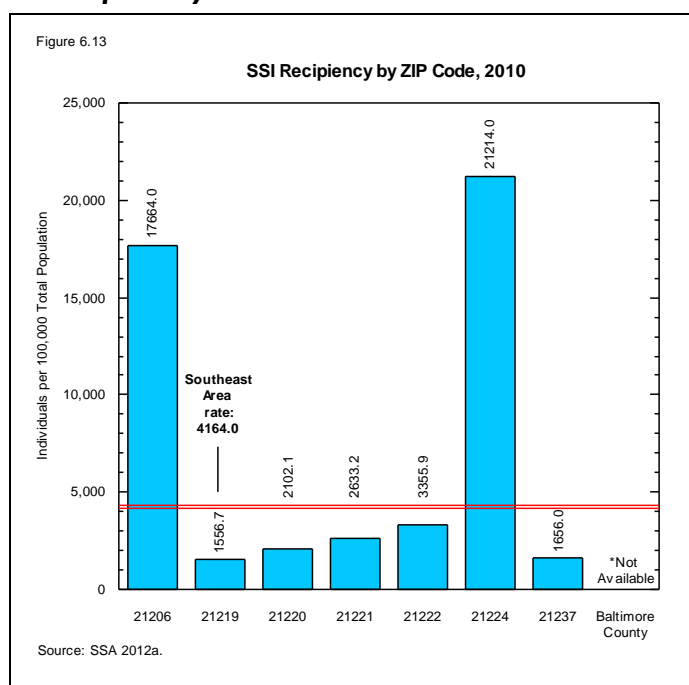Source: DHMH 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009; Sommers 2006, 2012.
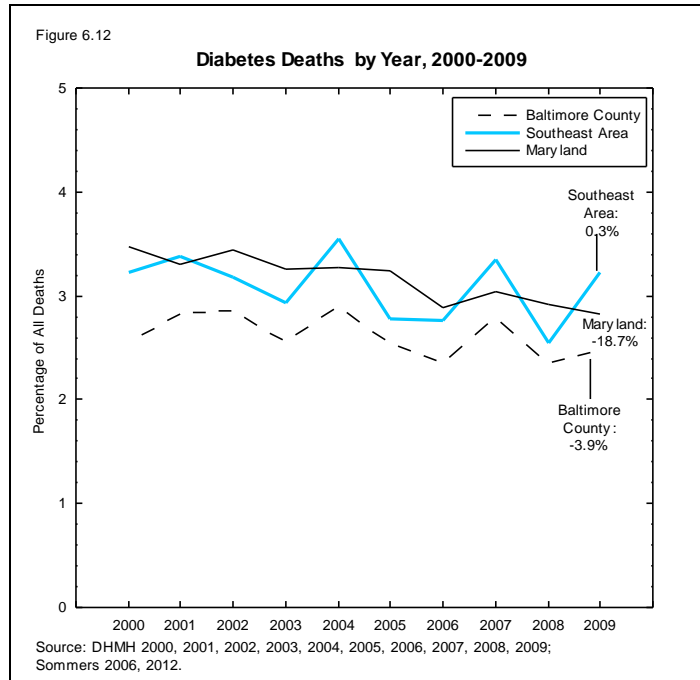
6.3 Welfare Indicators

Welfare recipiency in this report is made up of several indicators relating to financial aid to individuals and families from public funds. Welfare is used here as a generic term for supportive payments from public funds and refers to several programs. Looking at welfare recipiency in the studied areas can provide insight on several important economic indicators, including sufficient employment. This section looks at two main subsets of welfare: (1) individuals receiving federal Social Security Income (SSI) and (2) households receiving types of public assistance income.

The previous report used data from the 2000 U.S. Census in its analyses. In the 2010 Census, these data were not collected and alternative sources were found. For SSI recipiency, a request through the Freedom of Information Act was made to the U.S. Social Security Administration. For public assistance data, this report uses the 2007-2011 American Community Survey. Due to these changes, data are not comparable to previous years.

6.3.1. Supplemental Security Income Recipiency

The measurement of the number of individuals receiving Supplemental Security Income (SSI) in the southeast area is used as one proxy measure for financial health. The SSI data in the previous report are unfortunately not comparable to the data presented in this report. Previously, these data were gathered from the State of Maryland's Department of Planning (MDP n.d. a) and the 2000 U.S. Census (CB 2000) as the number of households receiving SSI benefits. The data used in this report were received from the Social Security Administration as the number of individuals receiving SSI benefits. According to the Social Security Administration's website, SSI benefits are meant to supplement the income of the elderly, blind or disabled. SSI benefits are based on the income and resources of the individual, but do not count all of the

Figure 6.13

SSI Recipiency by ZIP Code, 2010

Source: SSA 2012a.

individual's income (SSA 2012b). These data were not available for Baltimore County or the state of Maryland. As seen in figure 6.13, within the 7 ZIP codes of the southeast area, the 21224 ZIP code had the highest rate of SSI recipiency (21,214.0 recipients per 100,000 population). This mirrors the high rate trend seen for the 21224 (Eastpoint) area in a number of other crime and welfare indicators (discussed in Chapters Five through Seven of this report). This rate was followed by ZIP codes 21206 (17,664.0 recipients per 100,000 population), 21222 (3,355.9 recipients per 100,000 population), 21221 (2,633.2 recipients per 100,000 population), 21220 (2,102.1 recipients per 100,000 population), 21237 (1,656.0 recipients per 100,000 population) and 21219 (1,556.7 recipients per 100,000 population). There were only two southeast area ZIP codes with rates of SSI recipiency that were higher than the average rate in the southeast area (4,164.30 recipients per 100,000 population): 21206 and 21224. The 21219, 21220, 21221, 21222 and 21237 ZIP codes experienced rates of SSI recipiency that were lower than the average rate in the southeast area in 2010 (SSA 2012a).

6.3.2. Public Assistance Income Recipiency

Public assistance income is an important indicator for the southeast area, as it gives insight to both the number of individuals and families that live in impoverished conditions as well as the state of gainful employment in the studied areas. Public assistance looks at two distinct forms of aid: cash benefits and financial aid for food, which consists of those enrolled in Supplemental Nutrition Assistance Program (SNAP) and food stamp programs. Unlike previous years, public assistance income does not include the provision of medical benefits.

Data for public assistance indicators are taken from the American Community Survey for 2007-2011. Due to the nature of data collection, the numbers presented in the ACS are five-year estimates and do not represent the state of the studied areas in any one individual year. For more information on the ACS, see Chapter One.

6.3.2.1. Cash Public Assistance

According to the U.S. Census Bureau, cash public assistance is defined as cash payments to qualifying poor families. This includes two separate programs: (1) General Assistance and (2) Temporary Assistance to Needy Families (TANF). The TANF program is what is generally thought of as "welfare." This program was changed in 1997 to be a time-limited program, which has several overarching goals, including promotion of job preparation and employment and the reduction of out-of-wedlock pregnancies (OPA 2011). Cash public assistance is separate from SSI benefits and other non-cash benefits, such as food stamps/SNAP and financial aid for medical care (CB 2011b).

Figure 6.14

Estimated Percentage of Households with Cash Public Assistance Income for 2007-2011 by ZIP Code Tabulation Area

	Maryland	Baltimore County	21206	21219	21220	21221	21222	21224	21237
Estimated Percentage	2.1	1.8	3.5	1.3	3.1	2.9	2.5	3.8	1.7
% Margin of Error	0.1	0.2	1.2	0.8	0.9	0.9	0.7	1.0	0.9
Source: CB 2013, MDP 2013 a-b.									

Figure 6.14 shows the estimated percentage of households that received cash public assistance income in 2007-2011 in Maryland, Baltimore County and the ZIP codes of the southeast area, as well as the percentage margin of error for each measure. As shown, an estimated 2.1 percent of all households in Maryland received cash public assistance. Compared to Maryland, the estimate was lower in Baltimore County, at 1.8 percent of all households. In the southeast area, the percentage estimates were uneven across ZIP codes. The highest estimated percentage of households receiving cash public assistance was 21224 with 3.8 percent, followed by 21206 at 3.5 percent, 21220 at 3.1 percent, 21221 at 2.9 percent and 21222 at 2.5 percent. These five ZIP codes had percentages higher than the state estimate. The remaining two ZIP codes, 21237 and 21219, had estimates below the Baltimore County rate at 1.7 and 1.3 percent, respectively. It is of particular interest to note that while ZIP code 21224 had the highest estimated percentage of households receiving cash public assistance income in the southeast area from 2007-2011, this same ZIP code also boasted the highest estimated percentage of households (3.7 percent) earning more than $200,000 annually (CB 2013; MDP 2013a-b).

6.3.2.2. Supplemental Nutritional Assistance Program Income

Public assistance income also measures the estimated percentage of people who receive food assistance in the studied areas. This program is called the Supplemental Nutritional Assistance Program, or SNAP.

SNAP is part of the federal Food Supplement Program (FSP), which aids low-income households with food purchases. In Maryland, the SNAP program is run under the Department of Social Services. Those who are under 200 percent of the federal poverty level are eligible for SNAP benefits (DHR 2013a-b).

Figure 6.15									
Estimated Percentage of Households with Food Stamp/SNAP Benefits in the Past 12 Months for 2007-2011 by ZIP Code Tabulation Area									
	Maryland	**Baltimore County**	**21206**	**21219**	**21220**	**21221**	**21222**	**21224**	**21237**
Estimated Percentage	7.1	6.2	12.4	7.6	7.3	12.9	13.6	12.8	6.2
% Margin of Error	0.1	0.3	1.6	2.3	1.4	1.8	1.4	1.5	1.7
Source: CB 2013, MDP 2013 a-b.									

As seen above, figure 6.15 shows the estimated percentage of households receiving SNAP in the 12 months preceding survey completion from 2007-2011. Like many other indicators analyzed, the estimated percentages were significantly higher in the southeast area's ZIP codes than in Baltimore County or the state. Maryland had an estimated 7.1 percent of all households receiving SNAP benefits within 12 months of data collection. Baltimore County had a slightly lower estimate at 6.2 percent. In the southeast area, all estimates were greater or equal to the Baltimore County estimate; ZIP code 21222 had the highest estimated percentage at 13.6 percent, followed by 21221 at 12.9 percent, 21224 at 12.8 percent and 21206 at 12.4 percent. These estimates were at least double the estimated percentage for Baltimore County. While not as high, the estimated percentage of households receiving SNAP benefits within 12 months of data collection for the remaining ZIP codes were higher than Baltimore County and, in some cases, higher than the state estimate as well. ZIP code 21219 had an estimate of 7.6 percent, followed by 21220, with 7.3 percent, and 21237, which had an estimate of 6.2 percent, the same as Baltimore County (CB 2013; MDP 2013a-b).

6.4 Housing Indicators

Several aspects of housing are studied in this section, including rates of homeownership, availability of Section 8 housing and the waitlist for such affordable housing.

6.4.1. Homeownership

Homeownership is an excellent indicator of financial health with respect to the local cost of living. Homeownership also has a positive effect on crime in an area (Ni and Decker 2009). As a percentage of occupied units, all three observed areas have higher owner-occupied housing rates than the United States: Baltimore County (66.6 percent); the southeast area (65.7 percent); Maryland (67.5 percent); and the United States (65.1 percent). While these areas are faring well in comparison with the nation as a whole, a number of Maryland counties have higher owner-occupancy percentages than Baltimore County (CB 2001, 2011c).

In the years since the release of the 2000 U.S. Census data, there have been some changing dynamics among homeowner demographics in Baltimore County. In the 2000 U.S. Census, 52.2 percent of owner-occupied units in Baltimore County had owners between the ages of 35 and 54, while 31.5 percent had owners between the ages of 55 and 74. The 2010 U.S. Census showed a more even split in Baltimore County homeownership percentages between those two age groups, with 43.0 percent of owners between 35 and 54 years old and 42.1 percent of owners between 55 and 74 years old (MDP 2011b:3). With these data, we can clearly see that the average age of homeowners in Baltimore County is

Figure 6.16

Home Ownership by Area, 2000 and 2010: Owner-occupied Housing Units

Source: CB 2001, 2011c.

increasing. At the same time, the 2010 U.S. Census showed a slight increase in the number of owner-occupied units in Baltimore County from the 2000 U.S. Census (MDP 2011b:3). Figure 6.16 illustrates owner-occupied housing units as a percentage of all occupied housing units in the southeast area, Baltimore County, and Maryland based on the findings of the 2000 and 2010 U.S. Censuses. The southeast area experienced a slight owner-occupied housing percentage increase between 2000 and 2010 from 64.2 to 65.7 percent, an increase of 1.5 percentage points. Alternately, Baltimore County and Maryland experienced decreases in owner-occupied housing percentages, Baltimore County from 67.6 to 66.6 percent and Maryland from 67.7 to 67.5 percent. Still, the increase in percentage of owner-occupied housing units in the southeast area did not meet the owner-occupancy levels of Baltimore County or Maryland, though the gap was small (CB 2001, 2011c).

Figure 6.17

Home Ownership by ZIP Code, 2000 and 2010: Owner-occupied Housing Units

Source: CB 2001, 2011c.
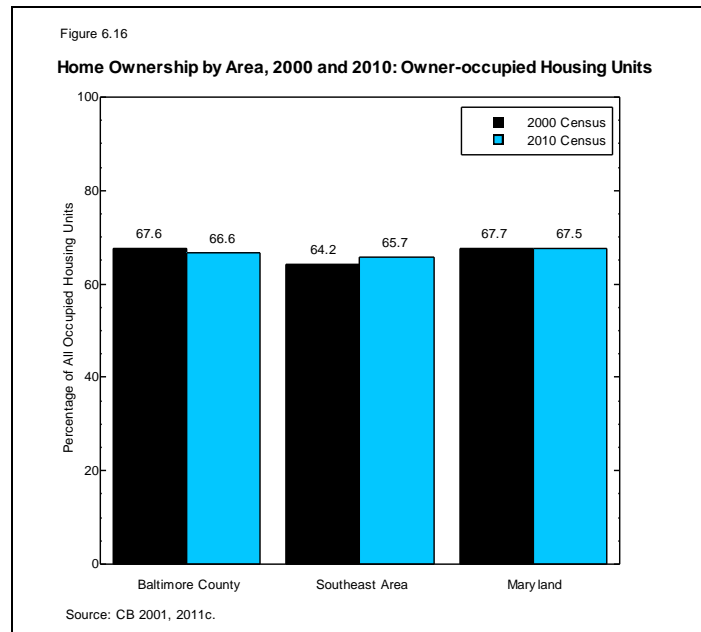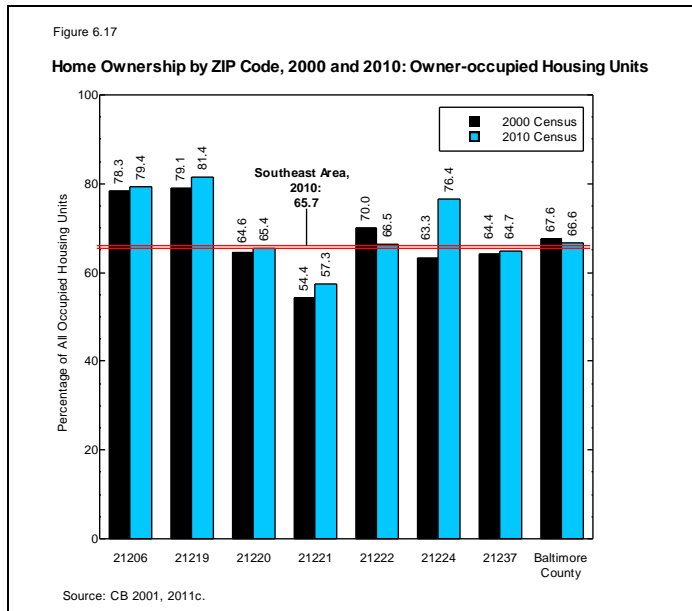
When owner-occupied housing units as a percentage of all occupied housing units are broken down by ZIP code as in figure 6.17, there is considerably more variation than when viewing percentages by area. Six southeast area ZIP codes experienced growth in percentages of owner-occupied housing units from 2000 to 2010: 21206 (from 78.3 to 79.4 percent); 21219 (from 79.1 to 81.4 percent); 21220 (from 64.6 to 65.4 percent); 21221 (from 54.4 to 57.3 percent); 21224 (63.3 to 76.4 percent) and 21237 (from 64.4 to 64.7 percent). Five of these six ZIP codes showed increases of 3 percentage points or less. ZIP code 21224, Eastpoint, experienced a sizable increase in owner-occupied housing as a percentage of all occupied units (CB 2001, 2011c). In 2004, Eastpoint had the second lowest average home price of the Baltimore suburbs (Hopkins 2005), likely spurring home-buying in the area. ZIP code 21222 was the only southeast area ZIP code to see an owner-occupancy decline in housing units from 2000 to 2010, with a decrease from 70.0 to 66.5 percent. Hovering around 80 percent each, ZIP codes 21206, Overlea, and 21219, Sparrows Point, have high owner-occupancy percentages when compared to any of the observed areas (CB 2001, 2011c).

6.4.2. Section 8 Housing Availability

The Housing Choice Voucher program, formerly Section 8, is the federal government's major housing subsidy program, which is available to very low-income, elderly and disabled individuals. Participants are free to choose any housing that meets the requirements of the program and are not limited to units located in subsidized housing projects. Housing Choice Voucher program rental subsidies are administered locally by public housing agencies (PHAs). The PHAs receive federal funds from the U.S. Department of Housing and Urban Development (HUD) to administer the voucher program (HUD 2012). In Baltimore County, families are placed on the waiting list based on the date and time of their application. Families with the earliest date and time of application are served first. The average wait list time to receive this benefit in Baltimore County is seven years (Baltimore County 2012). In order to assess the true need for Section 8 housing in an area, it is necessary to review data for both those currently leasing units and those waiting to do so.

The number of Section 8 units leased in Baltimore County (as shown in figure 6.18) decreased from 2007 to 2012 (from a rate of 76.22 per 10,000 population to 72.18 per 10,000 population). This represents a marginal decrease of 4.04 units leased per 10,000 population over five years. Conversely, the rate of Section 8 units leased increased in the southeast area during the same time period, from a rate of 106.05 per 10,000 population to 114.25 per 10,000 population. This represents an increase of 8.20 units leased per 10,000 population in five years. The number of leased Section 8 units was higher in the southeast area than in Baltimore County in both 2007 and 2012. Data for leased Section 8 units were not available for the state of Maryland (DSS 2008, 2012; Kingeter 2012b).

The number of leased Section 8 units in the seven ZIP codes of the southeast area varied between 2007 and 2011 (figure 6.19). The 21222 ZIP code had the highest number of Section 8 units leased in 2011 (140.54 per 10,000 population), followed by the ZIP codes 21221 (131.90 per 10,000 population) and

90

21220 (125.51 per 10,000 population). The 21237 and 21224 ZIP codes had the next highest Section 8 leasing, at 87.97 per 10,000 population and 80.93 per 10,000 population, respectively. The 21206 (49.70 per 10,000 population) and 21219 (23.46 per 10,000 population) ZIP codes had the lowest rates of Section 8 units leased in the southeast area in 2012. ZIP code 21206 had the largest change in leased Section 8 units during the observed years — an increase of 24.71 units per 10,000 population (from 24.99 per 10,000 population in 2007 to 49.70 per 10,000 population in 2012). ZIP code 21224 had the next largest increase in the rate of units leased, at a rate of 4.37 units per 10,000 population (from 76.56 per 10,000 population in 2007 to 80.93 per 10,000 population in 2012). ZIP code 21221 followed, at a change in rate of 2.12 units per 10,000 population (from 129.78 per 10,000 population to 131.90 per 10,000 population), and ZIP code 21219 had a small increase of 0.59 units per 10,000 population (22.87 per 10,000 population to 23.46 per 10,000 population). The 21222 ZIP had the largest decline in the rate of Section 8 units leased from 2007 to 2011, at 10.58 units per 10,000 population (from 151.12 per 10,000 population to 140.54 per 10,000 population). The 21237 and 21220 ZIP codes also experienced Section 8 leasing declines during the observed years, at 8.41 units per 10,000 population (96.38 per 10,000 population to 87.97 per 10,000 population) and 6.39 units per 10,000 population (from 131.90 per 10,000 population to 125.51 per 10,000 population), respectively. Three ZIP codes — 21220, 21221 and 21222 — had rates of Section 8 units leased that were higher than the average rate in the southeast area (114.25 per 10,000 population) in 2011. The 21206, 21219, 21224 and 21237 ZIP codes had lower rates of leased Section 8 units that the southeast area for 2011 (DSS 2008, 2012; Kingeter 2012b).

Figure 6.18

Section 8 Recipiency by Area, 2007 and 2011

Households Receiving Vouchers per 10,000 Population

Area	2007	2011
Baltimore County	76.22	72.18
Southeast Area	106.05	114.25
Maryland	*Not Available	

Source: DSS 2008, 2012; Kingeter 2012b.

Figure 6.19

Section 8 Units Leased by ZIP Code, 2007 and 2011

Southeast Area rate: 114.25

Households Receiving Vouchers per 10,000 Population

ZIP Code	2007	2011
21206	24.99	49.70
21219	22.87	23.46
21220	131.90	125.51
21221	129.78	131.90
21222	151.12	140.54
21224	76.56	80.93
21237	96.38	87.97
Baltimore County	76.22	72.18

Source: DSS 2008, 2012; Kingeter 2012b.

6.4.3. Section 8 Housing Waitlist

The Section 8 waitlist (figure 6.20) is represented in this report as the number of individuals on the waitlist to receive Section 8 vouchers as a proportion of the number of individuals currently receiving vouchers and leasing units. If the waitlist proportion for an area is greater than one (represented as the baseline proportion), there are more people on the Section 8 waitlist in that area than are currently receiving vouchers. The waitlist for Section 8 as a proportion of individuals receiving vouchers increased in both Baltimore County and the southeast area from 2008 to 2011. The proportion in Baltimore County increased from 1.56 to 3.48 in 2011, representing a proportional increase of 1.92. In the southeast area, the proportion of the waitlist to the number of individuals receiving vouchers increased from 1.48 in 2008 to 2.63 in 2011, for a proportional increase of 1.15. The waitlist as a proportion of those receiving vouchers was higher in Baltimore County in 2011 than in the southeast area. However, it is important to remember that the southeast area had a higher rate of Section 8 recipiency than the county. The Section 8 waitlist data were not available for the state of Maryland (DSS 2008, 2012; Kingeter 2012b).
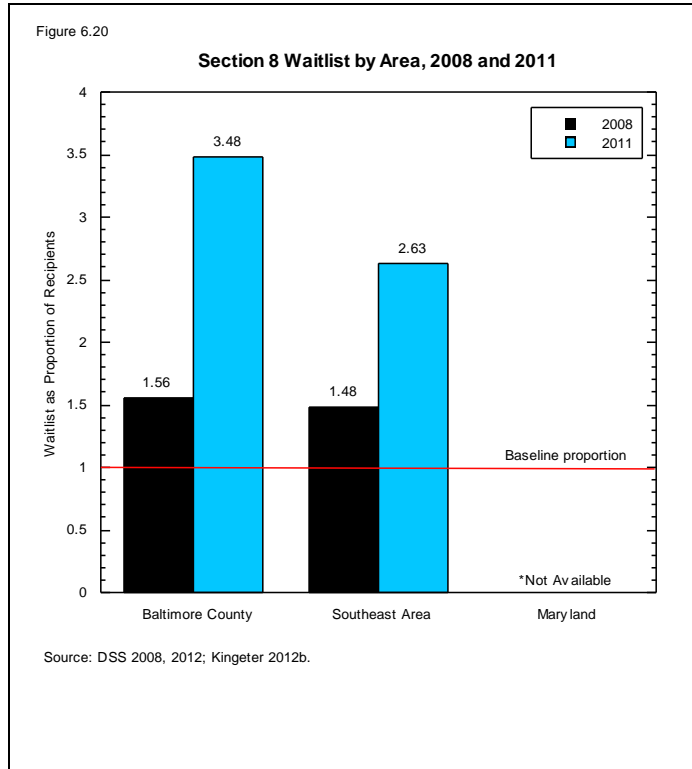
Figure 6.20

Section 8 Waitlist by Area, 2008 and 2011

Source: DSS 2008, 2012; Kingeter 2012b.

As shown in figure 6.21, the waitlist for Section 8 housing as a proportion of recipients increased in all seven ZIP codes of the southeast area from 2008 to 2011. ZIP code 21206 had the highest proportion of individuals on the Section 8 waitlist to the individuals receiving vouchers in both 2008, at 10.30, and 2011, at 15.54. This was a proportional increase of 5.24 in four years. In ZIP code 21224, the waitlist as a proportion of Section 8 recipients increased from 1.82 in 2007 to 6.09 in 2011, for the second largest proportional increase in the southeast area, at 4.27. The 21219 ZIP code had a waitlist proportion that increased from 2.86 to 3.96, for a proportional increase of 1.10, from 2008 to 2011, followed by: 21237, which increased from 1.40 to 2.95; 21221, from 1.23 to 2.30; and 21222, from 1.53 to 2.08. The increases in the 21221 and 21222 ZIP codes were 1.07 and 0.55, respectively.

The 21220 ZIP code had the smallest proportional increase (0.27) from 2008 to 2011 and the smallest waitlist as a proportion of recipients (1.74 in 2011). Four ZIP codes — 21206, 21219, 21224 and 21237 — had waitlist proportions that were higher than the average waitlist proportion in the southeast area (2.63). ZIP codes 21220, 21221 and 21222 had Section 8 waitlist proportions that were lower than the average figure for the southeast area in 2011 (DSS 2008, 2012; Kingeter 2012b).

Baltimore County's Department of Social Services has several programs that provide aid to individuals that receive Housing Choice Vouchers. These services include a GoSection 8 service, which helps recipients locate available units; the Family Self-Sufficiency Program, which helps recipients gain economic independence over a five year period and HUD-Veterans Affairs Supportive Services, which combines HUD Housing Choice Voucher rental assistance for homeless veterans with case management and clinical services provided by the Veterans Affairs at its medical centers and in the community (Baltimore County 2012). According to local research, Baltimore County experienced a decrease of about 20,000 affordable units between the years of 2000 and 2008. In an effort to prevent discrimination against Section 8 voucher

Figure 6.21

Section 8 Wait List by ZIP Code, 2008 and 2011

Source: DSS 2008, 2012; Kingeter 2012b.

recipients, attempts have been made to introduce legislation that would prevent landlords from running background checks on prospective tenants or making sure they have enough money to pay the rent each month (Knezevich 2012).

Chapter Seven: Crime Indicators for Adults & Seniors
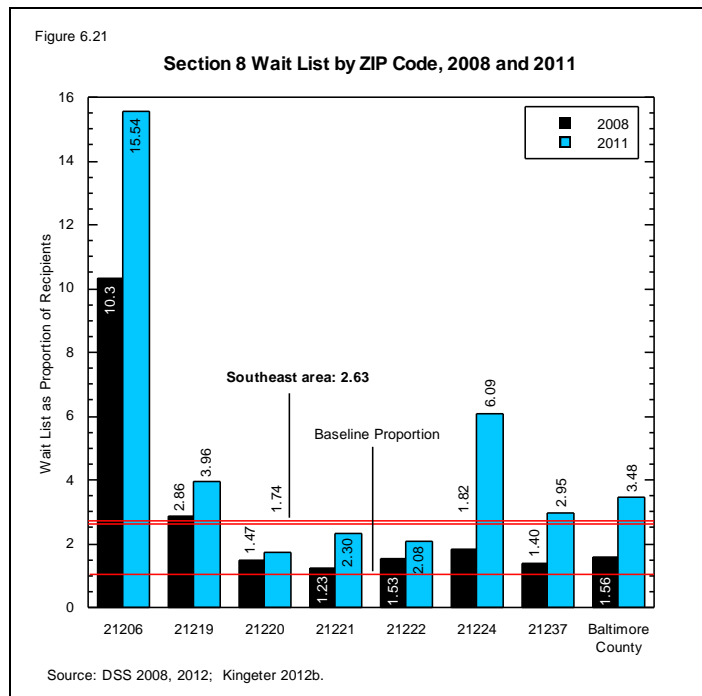
7.1 Introduction

Crime rates overall have been decreasing in the United States for many years. According to the U.S. Department of Justice, the rate of violent crime has decreased by 72 percent nationally since 1993 (BJS 2012). Similarly, the rate of property crime in the United States decreased from 4,903.70 to 2,908.70 reports per 100,000 population between 1992 and 2011, representing a 59.32 percent drop in property crime nationwide (FBI 2012b).

The Task Force explores several crime factors (seen in figure 7.1) for both the general public and senior citizens. The analyses focus on types of reported crime, such as violent crime, domestic violence and property crime. The senior crime analysis also includes the category of "less serious" crimes reported, which includes domestic incidents, destruction of property, common assaults, telephone misuse, fraud, patient abuse and forgery.

Figure 7.1	
Priority Areas and Indicators for Adult Crime	
Priority Area	**Selected Indicator**
Crime	Reported violent crime
	Reported non-violent crime
	Reported domestic violence
Crime against seniors	Reported violent crime against senior citizens
	Reported non-violent crime against senior citizens
	Reported "less serious" crimes against senior citizens

7.2 Adult Crime

This section explores reported crime, which differs from the juvenile crime statistics seen in Chapter Five. This section analyzes reported crime seen in each indicator, while the juvenile data explored arrests of perpetrators under 18 years old. Here, all crimes reported to the police in a particular area are examined. While these figures do not exclude crimes committed by juveniles, it can be assumed that adults commit the majority of reported crimes.

7.2.1. Reported Violent Crime

In the state of Maryland, violent crimes "involve an element of personal confrontation between the perpetrator and the victim" (MSP 2012). The term violent crime herein refers to four types of crime: homicides, rapes, robberies and aggravated assaults. Violent crimes are defined the same by both the Baltimore County Police Department and the 2011 Maryland Uniform Crime Report (UCR) (Medhin 2012; MSP 2012). This has changed from past years. In the previous report, state-level data for reported violent crime also included simple assaults. Simple assaults differ from aggravated assaults by the level of harm inflicted on the victim. Aggravated assaults usually involve a weapon and are considered a felony, while simple assaults are considered a misdemeanor and do not involve use of a weapon. It is important to note that simple assaults are not considered violent crimes and those data are not included in the information presented here (Zuback 2012). Data previous to this change have all references to simple assaults removed for consistency.

In order to contextualize violent crime in the studied areas, one must look at national and regional trends. Between 2010 and 2011, there was an overall decline in violent crime. Looking at specific types of crime, there was a 4.0 percent decline in each of the following types of crime: rapes, aggravated assaults and robberies. There was also a 1.9 percent decline in the homicide rate nationally (FBI 2012c). When considering regional violent crime, Maryland is part of the Federal Bureau of Investigation's southern region. Here, violent crime decreased by 4.5 percent overall between 2010 and 2011. The murder rate in that time frame dropped more in the southern region than seen nationally — 2.4 percent compared to 1.9 percent nationwide (FBI 2012d). There were corresponding declines in violent crime in Maryland, in Baltimore County and in the southeast area.

Figure 7.2

Reported Violent Crime by Area: 2005 and 2011

Note: "Violent crime" refers to assaults, homicides, rapes and robberies.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012; MSP 2006, 2012.

When compared to Maryland and Baltimore County, the southeast area had higher rates of reported violent crime both in 2005 and 2011, but the area has also seen the greatest decrease in violent crime between these years (figure 7.2). The southeast area saw the most change in reported violent crime amongst the studied areas, as the rate of reported violent crime decreased from 1,047.1 to 773.0 reported crimes per 100,000 population, representing a 274.1 drop in the reported rate between 2005 and 2011. This rate, though lower than the rate of reported violent crime in 2005, still surpasses the rate in Baltimore County (524.73 per 100,000 population) and Maryland (494.11 per 100,000 population) for 2011. The rate of violent crime in Baltimore County decreased by 223.92 reported violent crimes per 100,000 population, and in Maryland, the decrease was 249.19 reported violent crimes per 100,000 population between 2005 and 2011 (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).
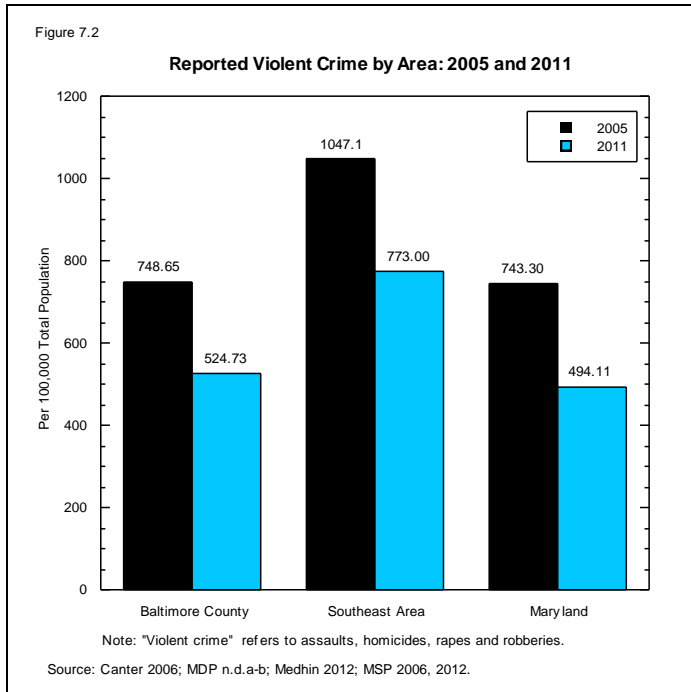
Within the southeast area itself, there have been declines in the rates of reported violent crime in all seven ZIP codes from 2005 to 2011 (figure 7.3). The 21224 ZIP code had the highest rate of violent crime in 2011 (1,375.7 per 100,000 population), followed by 21222 (949.31 per 100,000 population), 21221 (858.76 per 100,000 population), 21220 (594.40 per 100,000 population), 21237 (569.77 per 100,000 population), 21219 (543.77 per 100,000 population) and 21206 (477.92 per 100,000 population). The 21221, 21222 and 21224 ZIP codes had higher rates of reported violent crime in 2011 than the average rate in the southeast area, which was 773.00 per 100,000 population. Between 2005 and 2011, all studied ZIP codes also saw declines in reported crime. The 21237 ZIP code saw the largest decline in the southeast area between 2005 and 2011, with a decrease of 540.63 reported violent crimes per 100,000 population (from 1074.4 to 569.77 reported violent crimes per 100,000 population). This was followed by 21206 with a decrease of 493.85 (from 971.77 to 477.92 reported violent crimes per 100,000 population) and 21224 with a decrease of 320.4 (from 1696.1 to 1375.7 reported violent crimes per 100,000 population) in the same time period. ZIP codes 21222 and 21220 had similar rates of decline at 251.79 and 231.70 reported violent crimes per 100,000 population, respectively. ZIP code 21221 saw the largest decrease of reported violent crimes, at 146.24 per 100,000 population (from 1,005.0 to 858.76 reported violent crimes per 100,000 population). The smallest decline of 87.76 was seen in ZIP code 21219, which decreased from 631.53 to 543.77 reported violent crimes per 100,000 population from 2005 to 2011 data (Canter 2006; MDP n.d. b; Medhin 2012).

Figure 7.3

Reported Violent Crime by ZIP Code: 2005 and 2011

Note: "Violent crime" here refers to assaults, homicides, rapes and robberies.

Source: Canter 2006; MDP n.d. b; Medhin 2012.

Figure 7.4

Reported Violent Crime by ZIP Code and Type of Crime: 2011

Source: Canter 2006, MDP n.d.b; Medhin 2012.

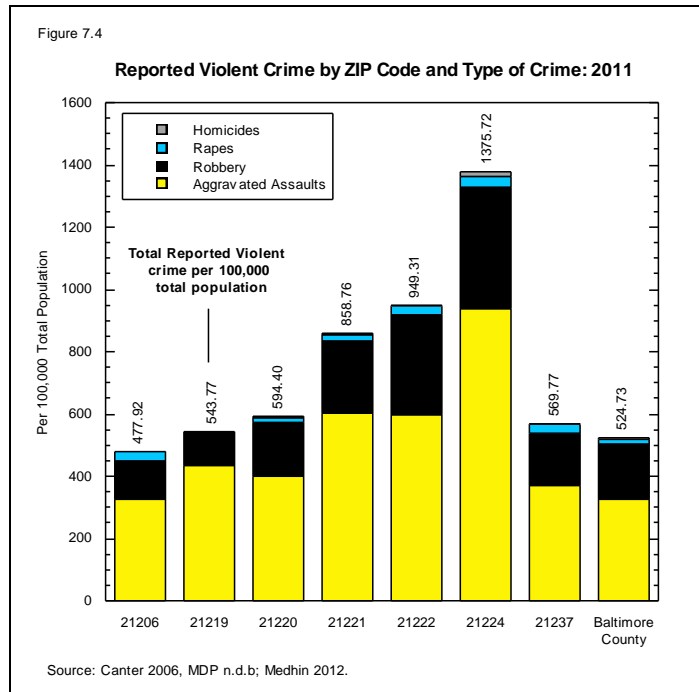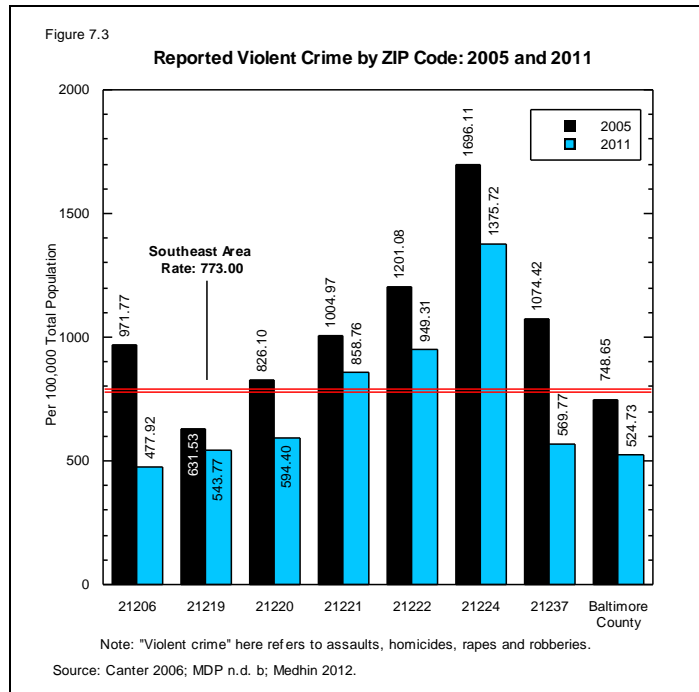Figure 7.4 shows reported violent crime by type of crime and ZIP code within the southeast area. Aggravated assaults constitute the majority of reported violent crimes perpetrated in all seven ZIP codes of the southeast area. The highest rate of aggravated assaults in 2011 was in the 21224 ZIP code (936.42 per 100,000 population), followed by: 21221 (602.55 per 100,000 population), 21222 (598.88 per

100,000 population), 21219 (437.15 per 100,000 population) and 21220 (400.52 per 100,000 population). ZIP codes 21237 and 21206 showed the lowest aggravated assault rates at 369.85 and 324.99 reported assaults per 100,000 population during 2011, respectively. The rate of reported aggravated assaults in Baltimore County in 2011 was 324.34 per 100,000 population. None of the ZIP codes within the southeast area had rates of reported aggravated assaults that were lower than this rate. The second most reported violent crime was robbery. The 21224 ZIP code also had the highest rate of reported robberies in 2011 (393.06 per 100,000 population), followed by: 21222 (318.91 per 100,000 population), 21221 (232.48 per 100,000 population), 21220 (173.47 per 100,000 population), 21237 (169.93 per 100,000 population), 21206 (124.26 per 100,000 population) and 21219 (106.62 per 100,000 population). Unlike the reported aggravated assault rate, four southeast area ZIP codes — 21220, 21237, 21206 and 21219 — had rates below that of Baltimore County (179.15 reports per 100,000 population) for robberies (Canter 2006; MDP n.d. b; Medhin 2012).

Rapes and homicides are arguably the most serious of the violent crimes and are, the least reported violent crimes in the southeast area (shown in figure 7.4). In examining reported rapes, ZIP code 21224 had the highest rate of rapes at 34.68 reports per 100,000 population in the southeast area according to 2011 data. The next highest reports were seen in ZIP codes 21206 (28.68 reports per 100,000 population), 21237 (26.66 reports per 100,000 population) and 21221 (21.35 reports per 100,000 population). The next lowest reported incidence of rape was seen in ZIP code 21220, with 15.31 reports per 100,000 population. There were no reported rapes in the 21219 ZIP code in 2011. The rate of reported rapes in Baltimore County in 2011 was 17.53 per 100,000 population; 21220 and 21219 were the only southeast area ZIP codes with rates lower than this. When looking at reported homicides, 21224 also leads the southeast area with the most reported homicides at 11.56 reports per 100,000 population. The remaining six southeast area ZIP codes all show rates less than half of this: 21220 has the next highest rate of reported homicides at 5.10 reports per 100,000 population, followed by: 21237 at 3.33 reports per 100,000 population, 21221 reports at 2.37 per 100,000 population and 21222 at 1.85 reports per 100,000 population. There were no reported homicides in the 21206 and 21219 ZIP codes in 2011. In addition to the 2 ZIP codes with no reported homicides, 3 ZIP codes have lower rates of reported homicides than Baltimore County's rate of 3.70 reports per 100,000 population — 21237, 21221 and 21222 (Canter 2006; MDP n.d. b; Medhin 2012).

7.2.2. Reported Non-violent Crime

Non-violent crime here is defined as property crime — theft, burglary, motor vehicle thefts and arsons. These crimes, much like the number of reported violent crimes, are decreasing both locally and throughout the United States. Nationally, there was an overall 0.8 percent decline in reported non-violent crime between 2010 and 2011 and a 3.3 percent drop in the number of reported auto thefts. This continues an ongoing trend of decreasing crime rates. The exception to this decline in non-violent crime was seen in the rate of reported burglaries, which increased by 0.3 percent in the same time frame. This overall trend was mirrored in the southern region of the U.S., of which Maryland is a part, with a 1.3 percent decline in overall property crime. Unlike the national increase in burglaries, the southern region experienced a 1.2 percent decline in these crimes from 2010 to 2011. The decline in reported motor vehicle thefts was even more significant in the southern region, with a 4.8 percent decline in the same time period (FBI 2012d). Trends in Maryland, Baltimore County and the southeast area have mirrored the national trend of decreasing reports of property crime.

Figure 7.5

Reported Property Crime by Area: 2005 and 2011

Note: "Property crime" here refers to burglaries, thefts, auto thefts and arsons.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012; MSP 2006, 2012.

The rates of reported property crime have declined in Baltimore County, Maryland and the southeast area from 2005 to 2011 (figure 7.5). Even with this decline, the rates of reported property crime in the southeast area are still higher than those of Baltimore County and Maryland. The rate of reported property crime in the southeast area in 2011 was 3,605.4 per 100,000 population, and the rates of property crime in Baltimore County and Maryland were 2,967.5 per 100,000 population and 2,885.9 per 100,000 population in the same year, respectively. The greatest decline in reported property crime was seen statewide, with a drop of 906.90 reports per 100,000 population between 2005 and 2011 (from 3,792.80 to 2,885.90 reports per 100,000 population, followed by the southeast area with a decline of 597.80 reports per 100,000 population (from 4,203.20 to 3,605.40 reports per 100,000 population). Baltimore County saw the smallest decrease in reported incidents, a decline of 379.90 reports per 100,000 population, from 3,347.40 to 2,967.50 reports per 100,000 population (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).
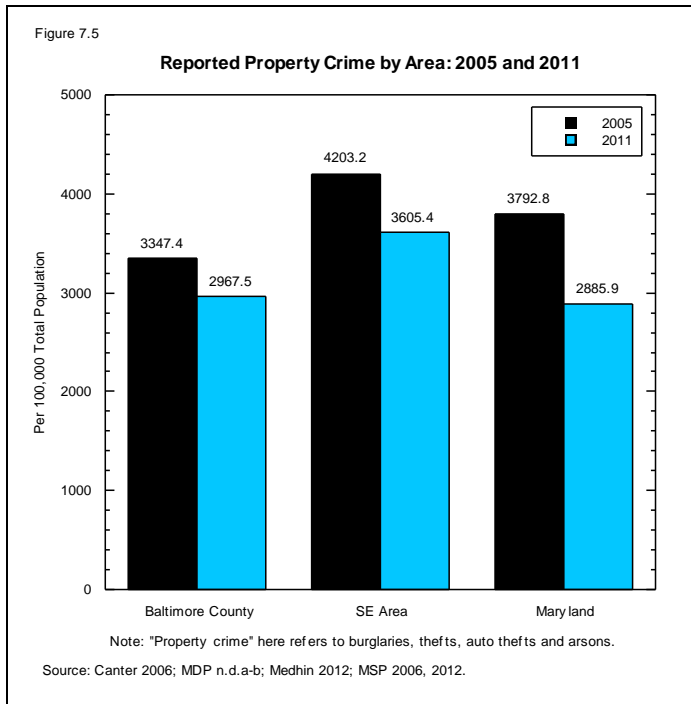
Figure 7.6

Reported Property Crime by ZIP Code: 2005 and 2011

Per 100,000 Total Population

Legend:
- ■ 2005
- ■ 2011

Southeast Area Rate: 3605.45

ZIP	2005	2011
21206	2924.57	2169.76
21219	2667.68	2420.30
21220	2971.22	2852.11
21221	3745.78	3209.66
21222	4441.95	4192.16
21224	12014.13	7236.99
21237	4720.33	3915.10
Baltimore County	3347.38	2967.50

Note: "Property crime" refers here to burglaries, thefts, auto thefts and arsons.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

As seen in figure 7.6, there was a general decline in the rate of reported property crime within all seven ZIP codes of the southeast area between 2005 and 2011. Despite this, only two ZIP codes — 21219 and 21220 — experienced reported property crime rates less than that of Baltimore County, with a rate of 2,967.5 reports per 100,000 population. The ZIP code with the highest rate of reported property crime in 2011 was again 21224, with 7,236.9 per 100,000 population, followed by 21222 with 4,192.2 reports per 100,000 population. The other 5 ZIP codes show rates less than half of the highest rate seen in the southeast area: 21237 (3,915.1 reports of property crime per 100,000 population); 21221 (3,209.7 reports per 100,000 population); 21220 (2,852.1 reports per 100,000 population); 21219 (2,420.3 reports per 100,000 population); and 21206 (2,169.8 reports per 100,000 population) (Canter 2006; MDP n.d. a-b; Medhin 2012).

Despite having the highest rate of reported property crime in 2011, the greatest decline in reports in the southeast area between 2005 and 2011 was seen in 21224 (Eastpoint), with a rate decrease of 4,777.14 reported property crimes per 100,000 population (from 12,014.13 to 7,236.99 reports per 100,000 population) (figure 7.6). Rosedale (21237) saw a decrease of 805.23 reports per 100,000 population (from 4,720.33 to 3,915.10 reports per 100,000 population), followed by Overlea (21206) with a decrease of 754.83 reports per 100,000 population (from 2,924.59 to 2,169.76 reports per 100,000 population) and Middle River (21221) with a decrease of 536.12 reports per 100,000 population (from 3,745.78 to 3,209.66 reports per 100,000 population). The three ZIP codes with the smallest decreases in reported non-violent crime between 2005 and 2011 were: 21222, with a decrease of 249.79 reports per 100,000 population (from 4,441.95 to 4,192.16 reports per 100,000 population); 21219, with a decline of 247.48 reports per 100,000 population (from 2,667.78 to 2,420.30 reports per 100,000 population); and 21220, with a decline of 119.11 reports per 100,000 population, (from 2,971.22 to 2,852.11 reports per 100,000 population). Three ZIP codes experienced reported property crime rates higher than the southeast area's rate of 3,605.45 reports per 100,000 population in 2011: 21222, 21224 and 21237 (Canter 2006; MDP n.d. a-b; Medhin 2012).

Figure 7.7

Reported Property Crime by ZIP Code and Type of Crime: 2011

Legend:
- Burglaries
- Thefts
- Auto Thefts
- Arsons

Y-axis: Per 100,000 Total Population (0; 1,000; 2,000; 3,000; 4,000; 5,000; 6,000; 7,000; 8,000)

Total Property crime Arrests per 100,000 total population

Values above bars:
- 21206: 2169.76
- 21219: 2420.30
- 21220: 2852.11
- 21221: 3209.66
- 21222: 4192.16
- 21224: 7236.99
- 21237: 3915.10
- Baltimore County: 2967.50

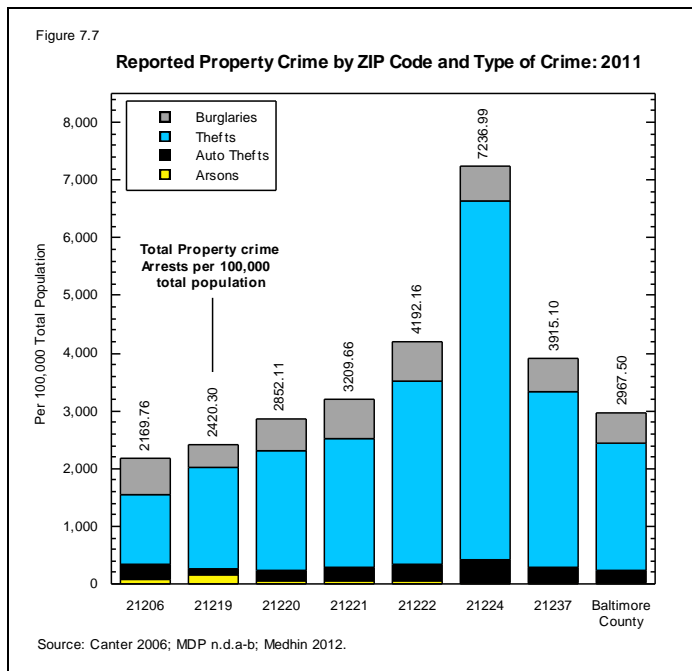Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

Figure 7.7 illustrates the reported property crime rates within the southeast area by the type of crime. The majority of the property crimes perpetrated in the southeast area are thefts, followed by burglaries, auto thefts and arsons. When looking at thefts, 21224 showed the highest rate of reported thefts at 6,219.65 reports per 100,000 population, followed by 21222 (3,185.4 reports per 100,000 population) and 21237 (3,035.4 reports per 100,000 population). ZIP codes 21221 and 21220 showed similar rates of reported theft at 2,232.3 and 2,063.8 reports per 100,000 population, respectively. Sparrows Point (21219) and Overlea (21206) have the lowest rates of reported thefts, at 1,748.6 and 1,235.5 reports per 100,000 population, respectively. The rate of thefts in Baltimore County in 2011 was 2,202.6 per 100,000 population, of which three southeast area ZIP codes — 21220, 21219 and 21206 — had lower rates of non-violent crime.

Reported burglary rates in the southeast area in 2011 (figure 7.7) are, in general, higher than that of Baltimore County; only one ZIP code (21219) had reported burglaries lower than the county's rate of 527.08 reports per 100,000 population. Essex (21221) led the southeast area, with a rate of 680.84 reports per 100,000 population. Unlike previous crime indicators, reported burglaries are relatively uniform throughout the southeast area. Dundalk (21222) showed the next highest rate of reported burglaries in 2011, at 676.75 reports per 100,000 population. This was followed by Overlea (21206) with 611.74 reports per 100,000 population, Eastpoint (21224) with 601.16 reports per 100,000 population and Rosedale (21237) with 583.10 reports per 100,000 population. Middle River (21220) and Sparrows Point (21219) showed the lowest rates of reported burglaries at 543.38 and 405.16 reports per 100,000 population, respectively. Auto thefts were the third most reported property crime in the southeast area. The 21224 ZIP code had the highest rate of reported auto thefts within the southeast area at 393.06 reports per 100,000 population. The next highest reports were from 21222 at 278.12 reports per 100,000 population, 21237 at 273.22 reports per 100,000 population, 21206 at 267.64 reports per 100,000 population and 21221 with 253.83 reports per 100,000 population. ZIP codes 21220 and 21219 were the only ZIP codes in the southeast area with rates lower than Baltimore County (at 208.78 reports per 100,000 population), with reported auto theft rates of 196.43 and 95.96 reports per 100,000 population in 2011, respectively (Canter 2006; MDP n.d. a-b; Medhin 2012).

Although 21219 showed some of the lowest rates of non-violent crimes in the southeast area, it was the leader in reported arsons for 2011 with a rate of 170.59 reports per 100,000 population (figure 7.7) (Canter 2006; MDP n.d. a-b; Medhin 2012). According to representatives of the Baltimore County Police Department, there was a string of arson offenses in the 21219 ZIP code in 2011, which included fires set in garages, trashcans, churches and motor vehicles. Due to this rash of arsons, these figures do not represent the normal reported arson rates in ZIP code 21219 (Brown, Howard and Metzger 2012; Metzger
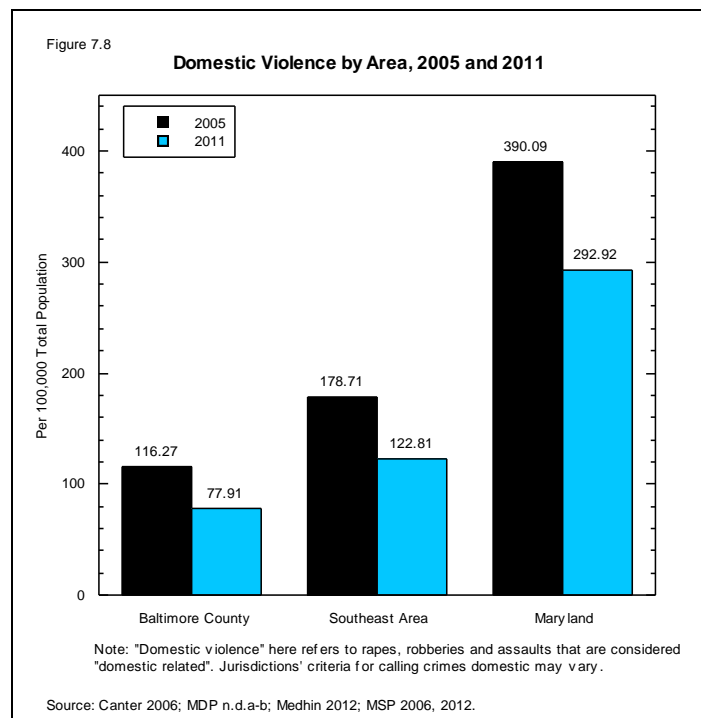
2012). The other six ZIP codes showed significantly lower rates of reported arsons. Despite this, only two ZIP codes, 21237 and 21224, had lower arson rates than Baltimore County's rate of 29.01 reports per 100,000 population. ZIP code 21206 had a rate of 66.91 arson reports per 100,000 population. This arson rate was followed by that of 21222, at 51.92 reports per 100,000 population; 21220, at 48.47 reports per 100,000 population; 21221, at 42.70 reports per 100,000 population; and 21237, at 23.32 reports per 100,000 population. The lowest rate of reported arsons was in the 21224 ZIP code, with 23.12 reports per 100,000 population (Canter 2006; MDP n.d. a-b; Medhin 2012).

There have been several programs implemented statewide and in Baltimore County, which may have affected to downward trend in reported violent and non-violent crime. One such program is the Maryland Offender Management System (MOMS), which allows law enforcement to search several related databases at once. The Violence Prevention Initiative, put forth by Governor Martin O'Malley in 2007, also allows for greater supervision of both adult and juvenile offenders by the Division of Parole and Probation (DPP). The identities of these high-risk offenders are shared with local law enforcement, which can assist DPP with supervision and therefore, potentially reduce repeated offenses. The Violence Prevention Initiative and other local programs, such as heightened community policing, enacted in Baltimore County may have impacted the rates of reported violent and non-violent crime (GOCCP 2012; Metzger 2012).

7.2.3. Reported Domestic Violence

According to the 2011 Maryland Uniform Crime Report, a domestic violence incident is any incident where "an individual has received deliberate physical injury or is in fear of imminent deliberate physical injury from a current or former spouse or a current or former cohabitant." This definition extends to anyone in an intimate relationship, including married couples, couples that are separated or estranged and individuals in non-marital relationships, including same-sex partnerships. Procedures for handling domestic violence crimes vary between the different law enforcement agencies (MSP 2012). There are efforts being made in Baltimore County to ensure victims of domestic violence are being helped, such as a Domestic Violence Coordinator being available at every precinct to link victims to needed resources (Metzger 2012). In order to ensure the present data are comparable to those presented in the previous report, the domestic violence incidents referred to here are assaults, rapes and robberies.

Figure 7.8

Domestic Violence by Area, 2005 and 2011

Note: "Domestic violence" here refers to rapes, robberies and assaults that are considered "domestic related". Jurisdictions' criteria for calling crimes domestic may vary.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012; MSP 2006, 2012.

Figure 7.8 shows that there was a decline in the rates of reported domestic violence incidents in the three studied areas from 2005 to 2011. The rate of reported domestic violence incidents in Baltimore County was 116.27 reports per 100,000 population in 2005 and fell to a rate of 77.91 reports per 100,000 population in 2011. This represents the smallest decline in the three studied areas, at 38.36 fewer reports per 100,000 population. The rate of reported domestic violence incidents in the southeast area fell from 178.71 reports per 100,000 population in 2005 to 122.81 reports per 100,000 population in 2011,

representing a decline of 55.90 reports per 100,000 population. The state of Maryland had the greatest decline in the rate of reported domestic incidents, falling from 390.09 reports per 100,000 population in 2005 to 292.92 reports per 100,000 population, representing a decline of 97.17 reports per 100,000 population (Canter 2006; MDP n.d. a-b; Medhin 2012; MSP 2006, 2012).

Figure 7.9

Domestic Violence by ZIP Code: 2005 and 2011

Note: "Domestic violence" here refers to rapes, robberies and assaults that are considered "domestic related". Jurisdictions' criteria for calling crimes domestic may vary.

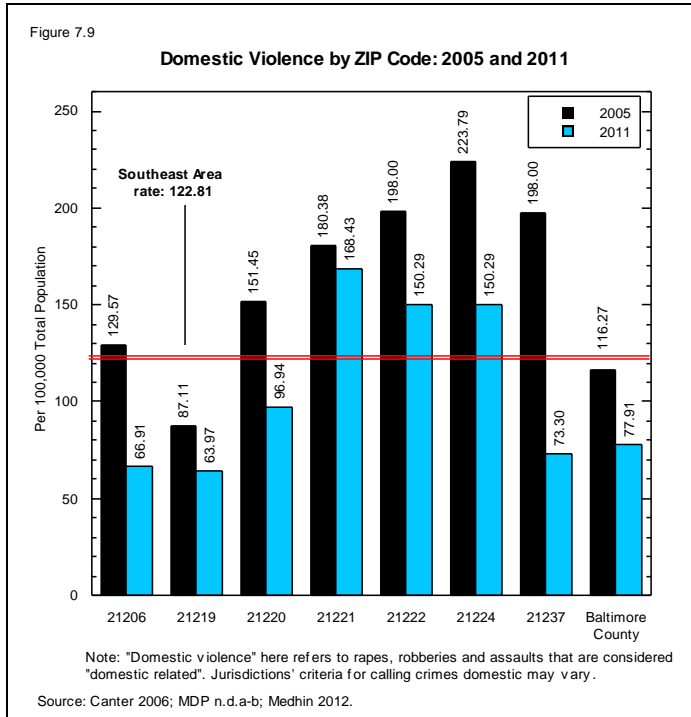Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

Figure 7.9 illustrates the reported domestic violence incidents within the seven ZIP codes of the southeast area, all of which saw declines in reported incidence rates between 2005 and 2011. Even so, four ZIP codes — 21220, 21221, 21222 and 21224 — had reported domestic violence incidents higher than the Baltimore County average of 77.91 reports per 100,000 population in 2011. The highest rate of reported incidents in 2011 was seen in 21221 at 168.43 reports per 100,000 population, which is more than double the Baltimore County rate. ZIP codes 21224 and 21222 have nearly identical rates of reported domestic violence incidents at 150.29 and 150.18 reports per 100,000 population, respectively. The reported incidence rates for 21220 (96.94 reports per 100,000 population), 21237 (73.30 reports per 100,000 population) and 21206 (66.91 reports per 100,000 population) in

2011 were significantly lower than the highest three ZIP codes and below the southeast area rate of 122.81 reports per 100,000 population. ZIP code 21219 had the lowest rate of reported domestic violence incidents, at 63.97 reports per 100,000 population in 2011. Over time, the 21237 ZIP code had the greatest decline in the rate of reported domestic incidents within the southeast area, representing a reduction of 124.20 reports per 100,000 population (from 197.50 to 73.30 reports per 100,000 population) between 2005 and 2011. The next largest declines were seen in 21224, with a decrease of 73.50 reports per 100,000 population (from 223.79 to 150.29 reports per 100,000 population); 21206, with a 60.66 decline (from 127.57 to 66.91 reports per 100,000 population); and 21220, with a decline of 54.51 reports per 100,000 population (from 151.45 to 96.94 reports per 100,000 population). The three ZIP codes with the least decline in reported domestic violence rates were 21222, with a 47.82 reports per 100,000 population decline; 21219, with a 23.14 reports per 100,000 population decline; and 21221, with a 11.95 reports per 100,000 population decline (Canter 2006; MDP n.d. a-b; Medhin 2012).
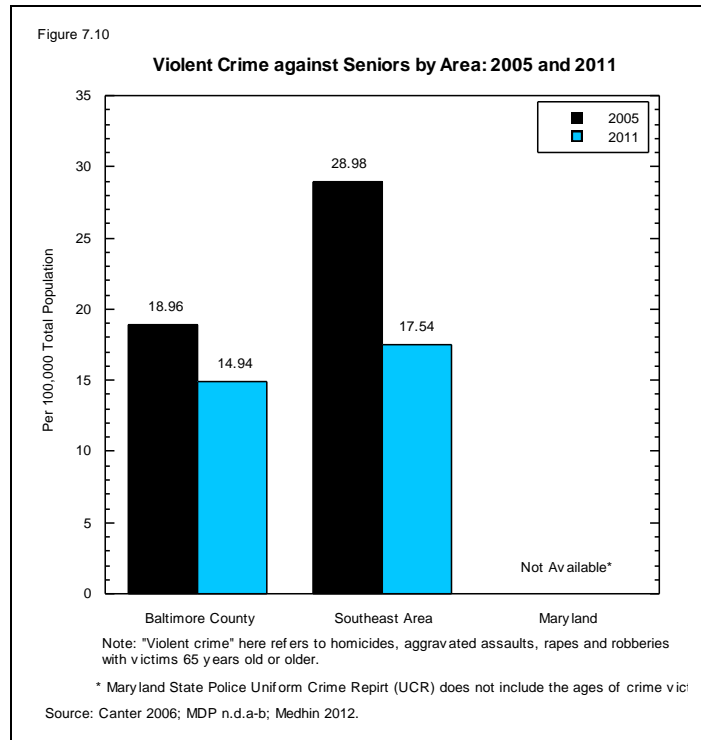
7.3 Crimes Against Senior Citizens

Seniors (ages 65 years and older) represent a vulnerable population, which has historically been targeted for crimes ranging from telemarketing fraud to patient abuse in nursing home facilities. In Baltimore County, the police department recognizes the need to protect this vulnerable population. The BCPD promotes an Elder/Vulnerable Adult Abuse program, which entails members of the police department visiting senior centers to educate residents on crime prevention and make them aware of certain criminal activities to which seniors are most vulnerable. The police department supports these individuals and their caregivers through education, crime prevention and information on resources available locally and statewide (Metzger 2012).

Although senior victim data are available for analysis at the local and county levels, data for Maryland as a whole are not available. The Maryland Uniform Crime Report (UCR) does not parse out data according to the victim's age (MSP 2012).

7.3.1. Reported Violent Crime Against Senior Citizens

Like the overall category of violent crime, reported violent crime against seniors includes incidents of aggravated assault, robberies, homicides and rapes. There has been a decrease in overall reported violent crime against seniors in both the southeast area and Baltimore County between 2005 and 2011 (figure 7.10). In Baltimore County, the rate of violent crime against seniors fell from 18.96 to 14.94 reports per 100,000 population, representing an overall decline of 4.02 reports per 100,000 population between 2005 and 2011. The rate in the southeast area fell from 28.98 to 17.54 reports per 100,000 population, representing a drop of 11.44 reports per 100,000 population in the same time period. The rate of violent crimes against seniors was higher in the southeast area than in Baltimore County in both 2005 and 2011 (Canter 2006; MDP n.d. a-b; Medhin 2012).

Figure 7.10

Violent Crime against Seniors by Area: 2005 and 2011

Note: "Violent crime" here refers to homicides, aggravated assaults, rapes and robberies with victims 65 years old or older.

* Maryland State Police Uniform Crime Repirt (UCR) does not include the ages of crime vict

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

Within the southeast area, ZIP code 21224 had the highest rate of violent crime against seniors in 2011 (69.36 reports per 100,000 population), as seen in figure 7.11. The second highest rate was seen in ZIP code 21237, at 23.32 reports per 100,000 population, which, although higher than both the southeast area and Baltimore County rates, is nearly three times less than that of 21224. Although high, there was a drop in reported violent crime between 2005 and 2011 — ZIP code 21220 experienced 20.41 reports per 100,000 population and ZIP code 21222 observed 20.40 reports per 100,000 population. Two ZIP codes — 21206 and 21221 — had rates below the southeast area's rate of 17.54 reports per 100,000 population in 2011, at 9.56 and 2.37 reports per 100,000 population, respectively. There were no violent crimes against seniors reported in the 21219 ZIP code in 2005 or 2011 (Canter 2006; MDP n.d. a-b; Medhin 2012). According to members of the BCPD, the Edgemere section of Sparrows Point (21219) is mainly a residential area with farmland and few points of interest, which results in lower non-residential presence and likely contributes to lower criminal activity (Metzger 20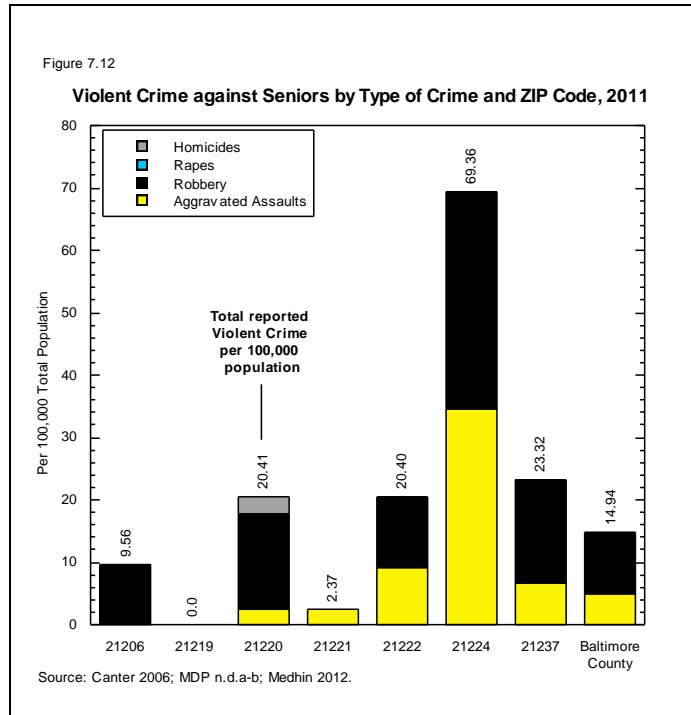12). Between 2005 and 2011, ZIP code 21206 experienced the greatest decline in the rate of violent crime against seniors, at a decrease of 27.46 reports per 100,000 population (from 37.02 to 9.56 reports per 100,000 population). This was followed in descending order by 21221, which decreased by 18.71 reports per 100,000 population (from 21.08 to 2.37 reports per 100,000 population); 21222, which decreased by 15.09 reports per 100,000 population (from 35.49 to 20.40 reports per 100,000 population; 21237, which decreased by 8.28 reports per 100,000

Figure 7.11

Violent Crime Against Seniors by ZIP Code: 2005 and 2011

Note: "Violent crime" here refers to homicides, aggravated assaults, rapes and robberies with victims 65 years old or older.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

population (from 31.60 to 23.32 reports per 100,000 population); and 21220, which decreased by 1.62 reports per 100,000 population (from 22.03 to 20.41). ZIP code 21224 saw the least significant decrease in reported violent crimes against seniors, at a decrease of 1.31 reports per 100,000 population between 2005 and 2011, from 70.67 to 69.36 (Canter 2006; MDP n.d. a-b; Medhin 2012). Figure 7.12 shows the rates for crimes against seniors in southeast area ZIP codes broken down by type of crime and demonstrates that aggravated assaults are the most common type of reported violent crime against seniors, followed by robberies and homicides. There were no reported rapes with senior victims in any of the southeast area ZIP codes. Looking at reported aggravated assaults against seniors, the 21224 ZIP code once again leads the area, with 34.68 reports per 100,000 population. The rates of 21222 (9.27 reports per 100,000 population), 21237 (6.66 reports per 100,000 population), 21220 (2.55 reports per 100,000 population) and 21221 (2.37 reports per 100,000 population) followed in 2011. There were no aggravated assaults against seniors reported in the 21206 or 21219 ZIP codes in 2011. Three ZIP codes showed reported aggravated assault rates higher than that of Baltimore County (5.06 reports per 100,000 population): 21224, 21222 and 21237.
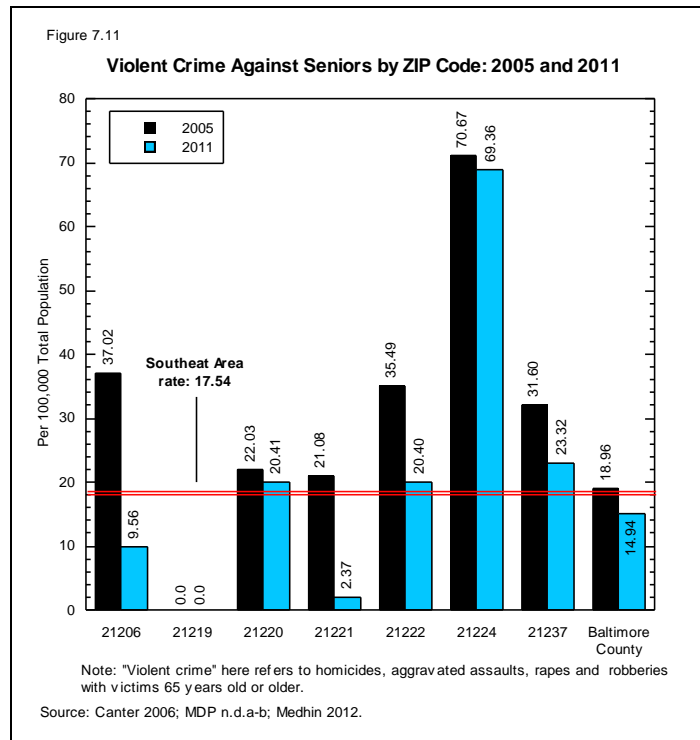
Looking at robberies and homicides (figure 7.12), the 21224 ZIP code also had the highest rate of reported robberies with senior victims (34.68 reports per 100,000 population), followed by: 21237 (16.66 reports per 100,000 population); 21220 (15.31 reports per 100,000 population); 21222 (11.12 reports per 100,000 population); and 21206 (9.56 reports per 100,000 population). There were no robberies with senior victims reported in ZIP codes 21219 or 21221 in 2011. Finally, Middle River (21220) was the only community reporting homicides with senior victims (2.55 reports per 100,000 population) (Canter 2006; MDP n.d. a-b; Medhin 2012).

Figure 7.12

Violent Crime against Seniors by Type of Crime and ZIP Code, 2011

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

7.3.2. Reported Non-violent Crime Against Senior Citizens

Unlike most of the other crime indicators in this report, the rates of property crime against seniors in both the southeast area and Baltimore County increased between 2005 and 2011 (figure 7.13). In Baltimore County, the rate of property crime against seniors increased from 194.75 to 230.02 reports per 100,000 population, which represents an increase of 35.27 reports per 100,000 population. In the southeast area, the rate of property crime increased from 275.85 to 288.97 reports per 100,000 population, which represents an increase of 13.12 reports per 100,000 population (Canter 2006; MDP n.d. a-b; Medhin 2012). The rate of property crime against seniors is still higher in the southeast area than in Baltimore County.

The rates of property crime against seniors varied within the southeast area in 2011 (see figure 7.14). In comparing the seven ZIP codes of the southeast area, 21222 had the highest rate of property crime against seniors (385.66 reports per 100,000 population), and this was followed by the rates of 21224 (358.38 reports per 100,000 population), 21219 (341.19 reports per 100,000 population), 21221 (275.18 reports per 100,000 population) and 21237 (239.90 reports per 100,000 population). ZIP codes 21220 and 21206 showed the lowest rates of reported non-violent crime in the southeast area at 204.09 and 200.73 reports per 100,000 population, respectively, and have rates that are at least 1.8 times lower than the highest rate seen in the southeast area (Canter 2006; MDP n.d. a-b; Medhin 2012).

As seen in figure 7.14, most of the southeast area ZIP codes experienced increases in the rates of property crime against seniors, with the exception of three ZIP codes (21206, 21224 and 21237). Notably, the 21219 ZIP code experienced

Figure 7.13

Property Crime against Seniors by Area, 2005 and 2011

Note: "Property crime" here refers to burglaries, theft, auto thefts and arsons with victims 65 years old or older.
*Maryland State Police Uniform Crime Report (UCR) data do not include the ages of crime victims.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

Figure 7.14

Property Crime against Seniors by ZIP Code, 2005 and 2011

Note: "Property crime" here refers to burglaries, thefts, auto thefts and arsons with victims 65 years old or older.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

the greatest increase in the rate of non-violent crime against seniors, rising from 239.55 to 341.19 reports per 100,000 population between 2005 and 2011, which represents an increase of 101.64 reports per
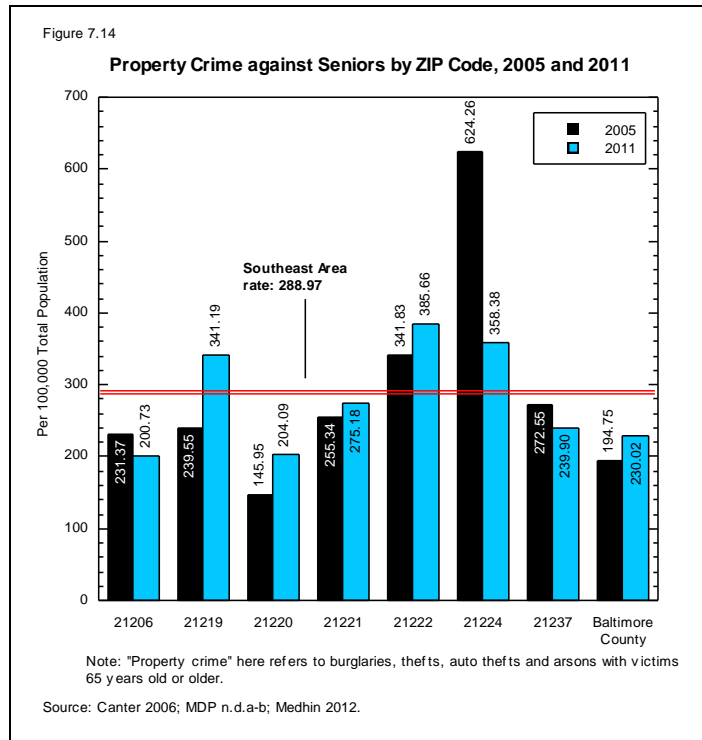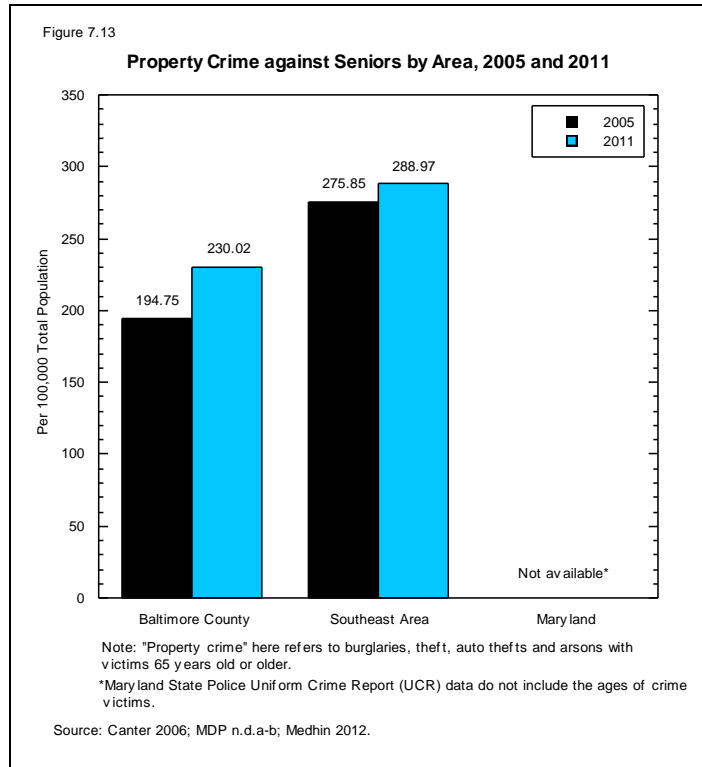
100,000 population. This was followed by 21220, with an increase of 58.14 reports per 100,000 population (from 145.95 to 204.09 reports per 100,000 population); 21222, with an increase of 43.83 reports per 100,000 population (from 341.83 to 385.66 reports per 100,000 population); and 21221, with an increase of 19.84 reports per 100,000 population (from 255.34 to 275.18 reports per 100,000 population). The 21224 ZIP code had the greatest decline in property crime against seniors with a decrease of 265.88 reports per 100,000 population (from 624.26 to 358.38 reports per 100,000), followed by ZIP code 21237, which had a 32.65 reports per 100,000 population decrease, from 272.55 to 239.90 reports per 100,000 between 2005 and 2011. ZIP code 21206 had the smallest decrease in reported incidents, with a decrease of 30.64 reports per 100,000 population, declining from 231.37 reports per 100,000 population in 2005 to 200.73 reports per 100,000 population in 2011 (Canter 2006; MDP n.d. a-b; Medhin 2012).

Figure 7.15 displays reported property crime against seniors in the southeast area by type of crime. The most common type of non-violent crime against seniors in 2011 was theft. Of the seven ZIP codes, 21224 had the highest rate of reported theft with senior victims in 2011 at 277.46 reports per 100,000 population, followed by 21222, at 261.43 reports per 100,000 population. The next highest rates of reported theft against seniors were in 21219, with a rate of 234.57 reports per 100,000 population; 21221, at 182.66 reports per 100,000 population; 21237, at 169.93 reports per 100,000 population; and 21220, at 137.76 reports per 100,000 population. The lowest rate of reported thefts with senior victims in 2011 was in ZIP code 21206, with 105.14 reports per 100,000 population. This was 2.63 times lower than the rate of ZIP code 21224 (Canter 2006; MDP n.d. a-b; Medhin 2012).

Burglaries and motor vehicle thefts, respectively, were the next most perpetrated of the non-violent crimes against seniors in the southeast area (figure 7.15). Looking at burglaries, the 21222 ZIP code had the highest rate of the seven ZIP codes in 2011, with 87.14 reports of burglaries against seniors per 100,000 population. The next highest rates of burglary against seniors in 2011 occurred in ZIP codes 21206, with 76.47 reports per 100,000 population; 21219, with 74.63 reports per 100,000 population; and 21221, with 71.17 reports per 100,000 population. The remaining three ZIP codes had noticeably lower rates of reported incidents — 21224 had 57.80 reports per 100,000 population, 21237 had 49.98 reports per 100,000 population and 21220 had 43.37 reports per 100,000 population in 2011. The 21222 ZIP code had the highest rate of motor vehicle thefts in the southeast area in 2011, at 33.37 reports per 100,000 population. The next highest rate of auto thefts with senior victims was seen in 21224, with a rate of 23.12 reports per 100,000 population. The remaining ZIP codes had 2011 auto thefts with senior victims rates as follow: 21221 (21.35 reports per 100,000 population); 21220 (20.41 reports per 100,000 population); 21237 (19.99 reports per 100,000 population); 21206 (19.12 reports per 100,000 population); and 21219 (10.66 reports per 100,000 population). The rate for ZIP code 21219 in 2011 was over three times lower than the rate of 21222 (Canter 2006; MDP n.d. a-b; Medhin 2012).
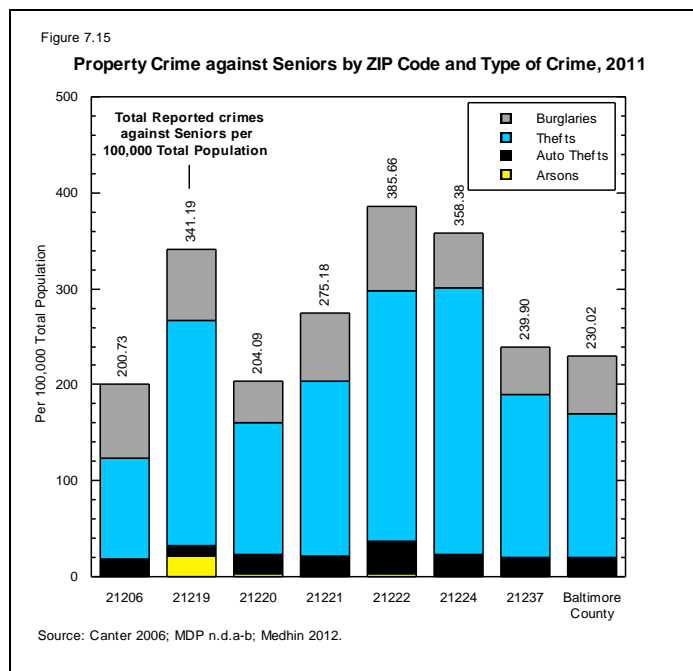
Figure 7.15

Property Crime against Seniors by ZIP Code and Type of Crime, 2011

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

Arsons with senior victims were the least reported non-violent crime against seniors in the southeast area, as seen in figure 7.15. ZIP code 21219 had the highest rate of arsons in 2011, at 21.32 reports per 100,000 population (Canter 2006; MDP n.d. a-b; Medhin 2012). As stated in the analysis for general non-violent crimes (section 7.2.2), there was a spike in arsons in this ZIP code in 2011, and these included a number of crimes with seniors as victims (Brown, Howard and Metzger 2012). The rest of the southeast area saw relatively few reported arsons with senior victims — ZIP code 21222 had 3.71 reports per 100,000 population for this type of crime, followed by 21220, which had 2.55 reports per 100,000 population in 2011. There were no reported arsons with senior victims in the 21206, 21221, 21224 or 21237 ZIP codes in 2011 (Canter 2006; MDP n.d. a-b; Medhin 2012).

7.3.3. Reported "Less Serious" Crimes Against Senior Citizens

In order to compare the current data to the 2008 report, "less serious" crimes against seniors, as referred to in this report, are classified as domestic incidents (which encompasses violations of protective orders and common assaults involving spouses), destruction of property, combined common assaults, telephone misuse, fraud, patient abuse and forgery. In the previous report, common assaults involving spouses were not included under domestic incidents, but were included under combined common assaults.

Figure 7.16

"Less Serious Crimes"* Against Seniors by Area, 2005 and 2011

*"Less serious" crimes include but are not limited to, domestic incidents (violation of protective order and common assaults spouse), destruction of property, combined "common" assault, fraud, patient abuse, telephone misuse and forgery with victims 65 years old or older.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

As shown in figure 7.16, the rates of less serious crimes against seniors declined in both Baltimore County and the southeast area from 2005 to 2011. In Baltimore County, the rate of reported less serious crimes against seniors fell from 194.22 reports per 100,000 population in 2005 to 140.87 reports per 100,000 population in 2011, which represents a decline of 53.35 reports per 100,000 population. In the southeast area, the rate of reported less serious crimes against seniors fell from 245.26 to 213.63 reports per 100,000 population between the same years. This represents a decline of 31.63 reports per 100,000 population in the southeast area from 2005 to 2011. When compared to Baltimore County, the southeast area experienced a higher rate of reported less serious crimes against seniors and a smaller rate of decline for the same since 2005 data (Canter 2006; MDP n.d. a-b; Medhin 2012).
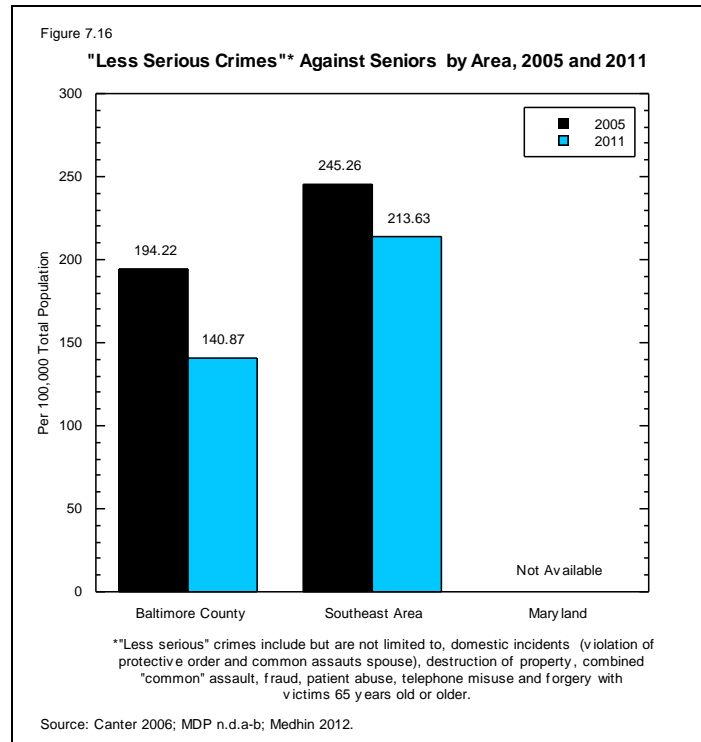
Within the southeast area, there were declines in the rate of reported less serious crimes against seniors in all but ZIP code 21220 (see figure 7.17). As in many other crime indicators, ZIP code 21224 had the highest rate of reported less serious crimes against seniors, at 358.38 reports per 100,000 population in 2011, followed by ZIP code 21222, with 246.60 reports per 100,000 population. The remaining rates of reported less serious crimes against seniors in the southeast area in 2011 were 21221, at 232.48 reports per 100,000 population; 21219, at 202.58 reports per 100,000 population; 21220, at 186.23 reports per 100,000 population; 21206, at 152.93 reports per 100,000 population; and 21237, at 113.29 reports per 100,000 population. ZIP code 21224 showed the greatest decline, with a 218.77 reports per 100,000 population decrease between 2005 and 2011, from 577.15 to 358.38 reports per 100,000 population. However, even with this decrease, the 21224 area leads the southeast area in rates of reported less serious crimes against seniors. (Canter 2006; MDP n.d. a-b; Medhin 2012).

Figure 7.17

"Less Serious Crimes"* against Seniors by ZIP Code, 2005 and 2011

Southeast Area rate: 213.63

*"Less serious" crimes include but are not limited to, domestic incidents (violation of protective order and common assauts spouse), destruction of property, combined "common" assault, fraud, patient abuse, telephone misuse and forgery with victims 65 years old or older.

Source: Canter 2006; MDP n.d.a-b; Medhin 2012.

Chapter Eight: Conclusion and Major Findings

MedStar Franklin Square Medical Center collaborates with the Southeast Network (the Network), a coalition of private and public entities working to study and improve the well-being of the southeastern area of Baltimore County. The area consists of seven ZIP codes within Baltimore County — 21206, 21219, 21220, 21221, 21222, 21224 and 21237. In 2007, the Network began work on the first needs assessment and created a strategic plan of improvement for the health and well-being of the area. InterGroup Services provided research and technical assistance for that project, which was published in 2008.

In 2012, MedStar Franklin Square consulted with InterGroup Services to create a revised report, to reexamine the 27 indicators of health and well-being chosen by the Network for the previous report. This chapter summarizes the major findings for the 2013 southeast area community needs assessment report.

8.1 Major Findings

InterGroup Services examined new data for the 27 chosen indicators at the state, county and ZIP code levels, where available. Five presentations of indicator findings were made to MedStar Franklin Square's Assessment Task Force between July 2012 and January 2013. As data availability changed, certain indicators required use of differing data sources, making a number of findings incomparable to the 2008 report. The major findings of the new research are summarized below.

8.1.1. Demographic and Socio-economic Data

Between 2000 and 2010, the population grew by 4.00 percent, with the largest growth seen in ZIP code 21237. Rosedale (21237) saw a population increase of 18.55 percent. Two ZIP codes — 21206 and 21221 — saw decreases in population during that time. Age in the southeast area is generally homogeneous, with most residents ages 20-49 years old. There is a growing older population as well, with a population over 50 years old outnumbering residents that are under 19 years of age.

Southeastern Baltimore County is predominantly white, with 72.37 percent of residents declaring this as their race on the 2010 U.S. Census. The area is, however, diversifying; there was a proportional 11.44 percent decline in white residents between 2000 and 2010 and an increase of residents of all other races, including Hispanic residents. The proportion of African-American residents increased the most, growing by 7.78 percent over 10 years. This was followed by the Hispanic population, which grew by 3.36 percent overall and showed near double-digit growth in ZIP code 21224. This greatly influenced the Hispanic birth rate, which followed an almost identical trend to the population increase seen over the last decade.

Looking at socio-economic data, the southeast area lags behind both Baltimore County and Maryland in terms of estimated household income. When examining estimated median household income data from the 2007-2011 American Community Survey, there were no southeast area ZIP codes with estimated median household incomes above either Baltimore County or Maryland. Eastpoint (21224) had the lowest estimated median income at $51,508 and Rosedale (21237) had the highest at $61,027. The largest percentage of estimated household incomes for the southeast area fell in the same range as Baltimore County, $50,000-$74,999, which was lower than Maryland's largest percentage of $100,000 to $149,999. At the extremes, Dundalk (21222) had the highest percentage of estimated household incomes under $10,000 and Middle River (21220) showed the lowest percentage in this income range. Despite the high rates of crime and other indicators that are often associated with poverty, Eastpoint (21224) showed the highest rate of estimated incomes over $200,000, at 3.7 percent.

Poverty is another socio-economic concern examined in this report. According to the 2007-2011 American Community Survey, five of the seven southeast area ZIP codes had higher estimated

percentages of individuals below the federal poverty line than Baltimore County and Maryland. Despite its areas of wealth, Eastpoint (21224) had an estimated percentage of individuals in poverty 2.34 times that of Baltimore County. This rate was even higher when looking at people under 18 years old living in poverty. Eastpoint had an estimated poverty rate 3.73 times higher than the county.

This report also examined births to undereducated mothers, which includes all women who have given birth that also have achieved less than 12 years of education. The southeast area had a high rate of these births compared to Baltimore County and Maryland. ZIP code 21224 had the highest rate of births to undereducated mothers in the southeast area and was one of three ZIP codes to show an increase in this measure, though the increase seen here was highest by far. This ZIP code also had the highest rate of indicated child abuse findings in the studied area. ZIP code 21237 had the lowest rate of births to undereducated mothers, as well as the highest median income in the southeast area. This ZIP code also showed the second lowest estimate of minors living below the federal poverty level. Education is crucial for the success of both parent and child. People with low educational attainment have limited career opportunities.

8.1.2. Infant Indicators

This report examines four indicators of infant health: infant mortality, low birth weights, births to Hispanic mothers and births to teenage mothers. All three studied areas showed infant mortality and low birth weight rates higher than the national average. The southeast area's 2005-2009 infant mortality rate was 1.40 times higher than the U.S. average; three ZIP codes in the area had higher rates than this. Infant mortality was highest in ZIP code 21206 and increased 7.87 times between the 2000-2004 and 2005-2009 data sets, from a rate of 1.57 to a rate of 12.35. Despite other negative health trends seen in ZIP code 21224, this neighborhood had the lowest infant mortality rate in the southeast area. Low birth weight decreased in the southeast area and in Baltimore County, but grew in Maryland. Across the southeast area, low birth weight rates were relatively homogeneous compared to other indicators, with the highest rate (seen in 21206) only 1.05 times higher than the area's rate. While this indicator showed stable rates across geographic area, it was unstable across time, especially in the southeast area, which showed a 1.57 percent decrease in low birth weight rate between 2000 and 2009, and a range of 1.49. The infant mortality rate was also unstable in the southeast area, showing a rate spread of 3.72. Both indicators showed record highs in 2004 and record lows in 2007.

Births to Hispanic and teenage mothers are the other two infant indicators. The Hispanic birth rate is rising nationally, and it rose in all three studied areas as well. The increase in births to Hispanic mothers followed the demographic increases between 2000 and 2010 almost exactly. Eastpoint (21224) had the largest increase in Hispanic residents (9.13 percent increase) and the largest increase in Hispanic births, with a 2005-2009 rate 4.74 times that of its 2000-2004 rate. The smallest increase in the Hispanic population was seen in Sparrows Point (21219), and this ZIP code also showed the smallest increase in Hispanic birth rate. Unlike the Hispanic birth rate, the teenage birth rate declined in the studied areas and nationally. This has been linked to strong pregnancy prevention messages and increased use of contraception, according to the U.S. Center for Disease Control and Prevention. While the rate declined in all studied areas, the biggest decrease was in the southeast area. All southeast area ZIP codes showed declines in the teenage birth rate, with the biggest change seen in Eastpoint, which went from having the highest rate in 2000-2004 to the fourth lowest rate in 2005-2009. Rosedale (21237) had the lowest rate of teenage births in the southeast area.

8.1.3. Safety Indicators

Both the 2008 and 2013 reports studied the number of indicated child abuse and neglect cases in the southeast area, Baltimore County and Maryland for SFY 2005 and SFY 2012. An indicated case of child abuse is one where credible evidence is shown. Child abuse and neglect cases rose in Baltimore County

and in the southeast area, with the latter having the highest studied rate. In the southeast area, certain ZIP codes showed higher rates of child abuse and neglect than others — both 21222 and 21224 had indicated findings above the southeast area average. ZIP code 21224 had the highest by far, at 2.5 times the southeast area rate in SFY 2012. The lowest report during this time was in ZIP code 21219, with a rate 3.90 times lower than the southeast area rate. The southeast area data shows a correlation between child abuse and neglect and poverty. Zip code 21224 had the highest rate of Supplemental Security Income (SSI) and cash public assistance and the lowest estimated median income, as well as the highest rate of child abuse and neglect. Similarly, 21222 had the highest estimated percentage of individuals with an income of $10,000 or less and the highest rate of Supplemental Nutritional Assistance Program (SNAP). This ZIP code also had the highest number of available Section 8 units in the southeast area.

8.1.4. Early Education Indicators

The southeast area seems to trail behind Baltimore County and the state in early childhood education and care, though the gaps are not broadening.

In examining the availability of child-care slots in both family and 8-12 hour centers, data showed a deficit in the total number of child-care slots available in the southeast area, as compared to the county and state. However, the southeast area had greater availability of family center slots than the other areas. No southeast area ZIP codes matched the child-care availability of the county, but 21237 (Rosedale) and 21219 (Sparrows Point) came close in 2011. Child-care disparities remained great in the southeast area in 2011, with total availability in 21224 (Eastpoint) at less than half that of other ZIP codes in the area.

Kindergarten readiness has improved significantly in five years. The state is making this indicator a priority for educational achievement because of the impact it can have on later learning capacity. In SY 2010-2011, some southeast area schools had 96 percent of students fully ready for kindergarten, while others had as few as 65 percent. All but one of the low performing schools received Title I funding

8.1.5. Later Education Indicators

The study of later education indicators in the southeast area uncovered improving test scores, troubling rates of chronic absenteeism, and underachieving rates of graduation and college plans.

MSA scores were studied for students in grades 3-8. Of the 40 southeast area schools observed at both elementary and middle school levels, only two (Eastwood Elementary Magnet and Deep Creek Elementary) did not have improved proficiency rates on the MSA from SY 2005-2006 to SY 2010-2011. The three lowest performing elementary schools were all Title I recipients, and two of these, Deep Creek and Mars Estates, are in Essex (ZIP code 21221). All middle schools in the southeast area had improved MSA proficiency, and even though the southeast area rate was still below those of the county and state, its rate improved more than 10 percent in 5 years.

Elementary and middle school students in the southeast area were more likely to be chronically absent than those in Baltimore County or Maryland. Some of the most troubling elementary chronic absenteeism rates were at schools in ZIP code 21221 (Essex). This is the same area that exhibited some of the worst MSA scores at the elementary level. Chronic absenteeism was shown to truly be a problem for high schools in the southeast area. While more than one in five Baltimore County high school students was chronically absent, the rate in some southeast area high schools was greater than one in four, and these rates were increasing.

Students leaving school is also a problem in the southeast area. Some schools had fewer than 75 percent of a class graduating, while Eastern Technical graduated more than 95 percent of its students. Four of the seven southeast area high schools had higher leaver rates than the county, but the rates themselves showed that this was not worthy of boasting.

The southeast area is sending significantly fewer of its students to four-year colleges than either the county or the state. Fewer than one in three high school seniors in the southeast area planned to attend a four-year college in SY 2010-2011, yet more than half of the seniors in the county and state planned to do the same. Eastern Technical, again the high performer in the southeast area, did not meet the rates of Baltimore County or Maryland, and Sparrows Point, the low performer, had just over one in five students planning to attend a four-year college.

8.1.6. Juvenile Crime Indicators

Juvenile delinquency is studied in this report through juvenile arrest rates in two calendar years — 2005 and 2011. Arrests for violent crimes, non-violent (property) crimes, and drug-related crimes were studied. Much like overall crime, juvenile offenses declined nationally and in all three studied areas. When looking at violent crime, decreases were seen in all three studied areas, with Baltimore County declining the most. Decreases in violent crime occurred in all southeast area ZIP codes except one — ZIP code 21220 showed a slight increase in juvenile violent crime arrests between 2005 and 2011. ZIP code 21222 had the highest rate of juvenile violent crime arrests in 2011. The largest decrease was in 21219, which had an arrest rate 4.42 times lower in 2011 than in 2005. Non-violent crimes decreased the most in the southeast area and also decreased in all southeast area ZIP codes. The most significant decline was seen in 21224, which showed a 2011 rate 3.40 times lower than its 2005 juvenile property crime arrest rate. This ZIP code still had a rate of non-violent crime 3.81 times the southeast area rate. The lowest rate of property crime arrests for juveniles was seen in 21219, with a rate 3.21 times lower than the southeast area rate. Drug-related arrests were also studied; while the southeast area showed the highest rate compared to Baltimore County and Maryland, the three juvenile arrests rates were very similar. All areas showed large declines since 2005. While drug-related juvenile arrests went down in most areas, these numbers rose in ZIP codes 21219 and 21224. ZIP code 21219 had the highest rate of juvenile drug-related arrests, and ZIP code 21237 had the lowest rate. The biggest decline in juvenile drug-related arrests was in 21206, which had a 2011 rate 6.05 times lower than in 2005.

When looking at juvenile arrests by type of offense, it becomes clear that certain ZIP codes have much larger problems with juvenile delinquency than others. As far as juvenile arrests, Eastpoint (21224) had the highest rates of aggravated assault and rape (both violent crimes), as well as the most thefts (a non-violent crime) of all studied ZIP codes. Dundalk (21222) had the highest rates for burglary and auto thefts (non-violent crimes). There were no homicides with juvenile arrests in 2011. The lowest juvenile arrest rate in the southeast area was observed in Sparrows Point (21219), which had the lowest rates of aggravated assault, robbery, thefts, and burglary. Furthermore, there were no rapes or automobile thefts in Sparrows Point with juvenile arrests. However, this area did have the highest rate of arsons. The Baltimore County Police Department confirmed that there was an increase of arsons in Sparrows Point overall during 2011. The overwhelming majority of drug-related juvenile arrests were for possession (compared to sales), and nearly all ZIP codes showed drug-related juvenile arrests rates for marijuana. Only two areas — Essex (21221) and Dundalk — had any juvenile arrests for cocaine or methamphetamines.

While programs have been developed to help juvenile offenders, such as the Juvenile Offenders in Need of Supervision (JOINS) project, these measures must be targeted and expanded. The JOINS program targets juvenile non-violent first offenders and has a 92 percent success rate. Drug-related juvenile arrests declined the most in the southeast area out of all juvenile crime indicators, but are still a problem in many areas. Sparrows Point and Eastpoint showed elevated drug-related arrests rates for juveniles.

8.1.7. Health Indicators

Health indicators studied in this report revealed improvements in the standing of the southeast area on major causes of death.

Bad debt and charity care, as seen at MedStar Franklin Square Medical Center, closely mirrored each other in the ranking of the southeast area ZIP codes from highest to lowest dollar amounts. ZIP codes 21219 (Sparrows Point) and 21222 (Dundalk) had the lowest bad debt and charity care, and ZIP codes 21206 (Overlea) and 21224 (Eastpoint) had the highest of each. Eastpoint is the most impoverished of the southeast area ZIP codes and Overlea has the second lowest average household income, so it is to be expected that these areas would be less able to pay for medical care.

Deaths from heart disease and cancer are on the decline in the southeast area. In 2009, the southeast area had the lowest heart disease death rate, and its cancer death rate was lower than Maryland's rate. There was little variance among southeast area ZIP codes for heart disease deaths, with just 2.8 percent separating the highest and lowest rates. The highest rates were seen in Essex (21221) and Sparrows Point (21219). Still, heart disease accounted for more than a fourth of all deaths in the southeast area and cancer nearly as many. The southeast area had the highest diabetes death rate in 2009, though over the 2005-2009 period, it had a better rate than the state. Diabetes death rates in the southeast area ranged from a high of 3.5 percent in Eastpoint (21224) to 2.4 percent in Overlea (21206). Eastpoint also had the highest cancer death rate. High rates for these indicators did not exclude the ZIP codes with higher average incomes.

8.1.8. Welfare Indicators

SSI recipiency in the southeast area in 2010 was highest in 21224 (Eastpoint) and 21206 (Overlea), the first and third most impoverished ZIP codes in the southeast area, respectively. Each of these ZIP codes alone accounted for more SSI recipiency that the other five southeast area ZIP codes combined. These same two ZIP codes accounted for the highest rates of cash public assistance income. Sparrows Point (21219) and Rosedale (21237) had lower cash public assistance income rates than Baltimore County. These two ZIP codes had the highest average household income in the area, so the low cash assistance rates are in line with that statistic. ZIP code 21237 (Rosedale) was the only ZIP code in the southeast area on par with the Baltimore County rate of households receiving SNAP benefits. All other ZIP codes were higher, and more than 13 percent of households in 21222 (Dundalk) had received SNAP within 12 months of the survey. These rates again mirrored the average household income by ZIP code.

8.1.9. Housing Indicators

In 2010, homeownership in the southeast area was slightly lower than in Baltimore County and Maryland, but all three areas had rates that were higher than the national average. Owner-occupied housing by ZIP code yielded some surprising findings. While it was not shocking that the owner-occupied housing percentage in 21219 (Sparrows Point) was the highest, it was unexpected that the next highest rates would be found in 21206 (Overlea) and 21224 (Eastpoint). Each of these ZIP codes had an owner-occupancy rate of greater than 75 percent.

At the opposite end of the housing spectrum, the southeast area had a much higher rate of Section 8 housing availability than Baltimore County, but availability was mixed among southeast area ZIP codes. Dundalk (21222) had the highest Section 8 voucher recipiency in 2011, and Sparrows Point (21219) had the lowest. The southeast area had a smaller Section 8 waitlist as a proportion of recipiency than the county, but it had dramatically increased in four years. The Section 8 waitlist was highest in Overlea (21206) and lowest in Middle River (21220).

8.1.10. Adult Crime Indicators

Reported violent crime, non-violent crime and domestic violence all decreased in the southeast area, Baltimore County and Maryland.

The southeast area had substantially more reported violent and non-violent crime than either the county or the state in 2011, and this has been the case for some time. Reported adult violent and non-violent crimes were each highest in the 21224 ZIP code. Aggravated assaults and thefts were the most common of these types of crimes.

For reported domestic violence, the southeast area rate was higher than Baltimore County but less than half of the state rate. Domestic violence was highest in ZIP code 21221 (Essex).

8.1.11. Crimes Against Senior Citizens

Finally, the Task Force focused on crimes perpetrated against senior citizens, who are defined as persons over the age of 65. Senior citizens are a vulnerable population and often become targets of attacks. Here, crimes against seniors are divided into three types of crime: violent, non-violent and "less serious" crimes, which include offenses such as domestic incidents, destruction of property, common assaults, telephone misuse, fraud, patient abuse and forgery.

Since Maryland does not report crime by age of victim, these data are only available for Baltimore County and the southeast area. The southeast area saw declines in violent crimes and less serious crimes against seniors, but a rise in the number of reported property crimes. Robberies and aggravated assaults were the most perpetrated violent crimes against seniors in all ZIP codes, with 21224 leading the number of reported violent crimes. This ZIP code had a rate 3.95 times higher than the southeast area rate. Despite this alarming rate, all ZIP codes saw a decline in reported violent crimes with senior victims except 21219, which showed no crimes in this category for either 2005 or 2011. ZIP code 21224 also had the highest rate of less serious crimes, at 1.68 times the southeast area average. Less serious crimes decreased in all ZIP codes but 21220, which experienced a 2011 rate 1.17 times the 2005 rate. Non-violent crimes, however, rose in four of the seven studied ZIP codes. The highest rate of non-violent crime was in ZIP code 21222, followed by 21224 and 21219. These three neighborhoods showed non-violent crime reports against seniors above the southeast area average. The only ZIP code that showed a property crime rate lower than Baltimore County was ZIP code 21222, despite its high crime rates in other areas.

Looking at crime by type of offense, ZIP codes 21222 and 21224 show the highest rates of offenses against senior citizens. ZIP code 21224 showed the highest rate of aggravated assaults, robbery, theft and automobile theft reported with senior victims. ZIP code 21222 showed the highest rate of reported burglaries and the second highest rates of aggravated assault and theft in the southeast area for seniors. There were no robberies (a violent crime) perpetrated against seniors in 21222. The only instance of homicide with a senior victim was seen in 21220, and no rapes were reported involving seniors. Much like other crime indicators, the 21219 ZIP code showed the lowest rates of crime, with no aggravated assaults, homicides, rapes or robberies perpetrated and the lowest rate of automobile theft against seniors in the southeast area.

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Appendix A: Age in the Southeast Area

Age by ZIP Code Tabulation Area in the Southeast Area of Baltimore County, 2000 and 2010 and Percentage Change									
		21206	21219	21220	21221	21222	21224	21237	Southeast Area
< 5 years old	2000	788	343	2,487	2,879	3,099	429	1,467	1,1492
	2010	637	460	2,767	2,953	3,469	558	2,037	12,881
	Change	-19.16%	34.11%	11.26%	2.57%	11.94%	30.07%	38.85%	12.09%
5-9	2000	745	634	2,729	3,067	3,610	586	1,532	12,903
	2010	692	501	2,374	2,584	3,271	553	1,815	11,790
	Change	-7.11%	-20.98%	-13.01%	-15.75%	-9.39%	-5.63%	18.47%	-8.63%
10-14	2000	993	744	2,826	3,201	3,933	580	1,589	13,866
	2010	768	586	2,487	2,508	3,328	524	1,646	11,847
	Change	-22.66%	-21.24%	-12.00%	-21.65%	-15.38%	-9.66%	3.59%	-14.56%
15-19	2000	848	591	2,224	2,710	3,373	733	1,630	12,109
	2010	847	682	2,502	2,774	3,723	541	1,748	12,817
	Change	-0.12%	15.40%	12.50%	2.36%	10.38%	-26.19%	7.24%	5.85%
20-29	2000	1,151	726	4,584	5,373	5,375	777	3,509	21,495
	2010	1,300	966	5,786	6,109	7,437	1,242	4,542	27,382
	Change	12.95%	33.06%	26.22%	13.70%	38.36%	59.85%	29.44%	27.39%
30-39	2000	1,679	1,326	6,008	6,566	7,918	1,250	4,132	28,879
	2010	1,345	921	5,183	5,185	6,350	1,114	4,489	24,587
	Change	-19.89%	-30.54%	-13.73%	-21.03%	-19.80%	-10.88%	8.64%	-14.86%
40-49	2000	1,687	1,644	5,643	6,846	8,335	1,264	4,135	29,554
	2010	1,574	1,495	5,585	5,936	7,587	1,179	4,092	27,448
	Change	-6.70%	-9.06%	-1.03%	-13.29%	-8.97%	-6.72%	-1.04%	7.13%
50-59	2000	1,259	1,250	4,255	4,435	6,072	830	2,745	20,846
	2010	1,455	1,588	5,424	6,030	7,840	1,185	4,122	27,744
	Change	15.57%	27.04%	29.82%	35.96%	29.12%	42.77%	50.16%	33.09%
60-69	2000	684	870	2,638	3,409	5,038	686	1,834	15,159
	2010	939	1,056	3,712	4,047	5,219	701	2,645	18,319
	Change	37.28%	21.38%	40.71%	18.72%	3.59%	2.19%	44.22%	20.85%
70-79	2000	675	680	2,019	2,929	4,698	962	1,877	13,840
	2010	525	676	1,995	2,376	3,365	551	1,626	11,114
	Change	-22.22%	-0.59%	-1.19%	-18.88%	-28.37%	-42.72%	-13.37%	-19.70%
> 80 years old	2000	296	376	902	1,273	2,084	393	866	6,190
	2010	380	448	1,284	1,652	2,345	502	1,250	7,861
	Change	28.38%	19.15%	42.35%	29.77%	12.52%	27.74%	44.34%	27.00%
Source: MDP n.d a-b.									

		21206	21219	21220	21221	21222	21224	21237	Southeast Area	Baltimore County	Maryland
	Infant Mortality and Live Births by ZIP Code Tabulation Area in the Southeast Area of Baltimore County, 2000-2009										
2000	Infant Deaths	1	1	3	6	4	0	5	20	57	434
	Live Births	130	95	491	620	639	95	361	2,431	5,564	66,382
2001	Infant Deaths	0	3	4	6	2	0	5	20	74	462
	Live Births	111	90	493	546	592	84	312	2,228	5,776	65,397
2002	Infant Deaths	0	0	8	6	4	0	2	20	71	446
	Live Births	137	90	485	523	641	87	313	2,276	5,830	65,585
2003	Infant Deaths	0	0	7	5	8	0	3	23	73	495
	Live Births	126	96	540	596	674	107	396	2,535	6,060	67,366
2004	Infant Deaths	0	0	2	10	10	1	1	24	66	510
	Live Births	134	98	458	604	657	110	381	2,442	6,217	67,072
2005	Infant Deaths	1	0	4	3	12	1	3	24	83	459
	Live Births	102	99	535	585	701	114	437	2,573	9,661	67,767
2006	Infant Deaths	0	1	4	5	9	1	6	26	67	500
	Live Births	160	105	520	654	775	115	422	2,751	6,641	70,451
2007	Infant Deaths	2	0	3	7	4	0	1	17	72	491
	Live Births	138	100	562	654	740	136	452	2,782	6,439	71,214
2008	Infant Deaths	2	2	6	8	5	1	3	27	72	502
	Live Births	133	91	614	671	802	131	460	2,902	6,552	70,938
2009	Infant Deaths	3	0	5	5	5	0	5	23	72	455
	Live Births	115	84	600	620	735	140	457	2,751	6,336	69,030

Source: MDP n.d a-b.

Appendix C: Teen Births in the Southeast Area

		21206	21219	21220	21221	21222	21224	21237	Southeast Area	Baltimore County	Maryland
2000	Teen Births	19	12	61	93	96	14	30	325	768	6,829
	Live Births	111	83	429	527	543	81	331	2,105	9,353	66,382
2001	Teen Births	12	11	72	80	97	14	22	308	695	6,430
	Live Births	99	79	421	496	495	70	290	1,950	9,027	65,397
2002	Teen Births	17	7	49	70	108	15	29	295	683	6,245
	Live Births	120	83	436	453	533	72	284	1,981	8,967	65,585
2003	Teen Births	16	14	62	74	91	13	30	300	723	5,976
	Live Births	110	82	478	522	583	94	366	2,235	9,320	67,366
2004	Teen Births	27	12	55	80	108	20	23	325	712	5,897
	Live Births	107	86	403	524	549	90	358	2,117	9,407	67,072
2005	Teen Births	10	7	69	84	101	14	27	312	662	5,961
	Live Births	102	99	535	585	701	114	437	2,573	9,661	67,767
2006	Teen Births	14	12	54	87	119	13	35	334	791	6,359
	Live Births	160	105	520	654	775	115	422	2,751	9,896	70,451
2007	Teen Births	23	8	64	79	102	21	29	326	804	6,544
	Live Births	138	100	562	654	740	136	452	2,782	10,111	71,214
2008	Teen Births	17	9	53	94	119	7	34	333	767	6,230
	Live Births	133	91	614	671	802	131	460	2,902	10,159	70,938
2009	Teen Births	14	10	47	67	86	10	27	261	687	5,889
	Live Births	115	84	600	620	735	140	457	2,751	9,869	69,030

Teen Births and Live Births by ZIP Code Tabulation Area in the Southeast Area of Baltimore County, 2000-2009

Source: MDP n.d a-b.

Appendix D: InterGroup Services

IGS specializes in helping government agencies, non-profit entities and for-profit businesses generate products necessary to achieve program objectives and run operations — and has been doing so for over 15 years.
Some key facts about the organization are:

- Established in 1997.
- Registered S-corporation in good standing.
- U.S. Small Business Administration-certified Small Disadvantaged Business (SBA SDB).
- Maryland Department of Transportation-certified Minority Business Enterprise (MDOT MBE).
- Office located in a U.S. Small Business Administration Historically Underutilized Business Zone (HUBZone).
- Seven regular staff and a network of over 30 consultants.
- Availability of over 14,000 square feet of space.

IGS has extensive experience in all phases of survey research, comprehensive planning of health services, report writing, graphics generation and data analysis. IGS, therefore, is well suited to research, analyze, write, and edit the upcoming Franklin Square Hospital FY 2012 Community Health Assessment ("needs assessment," hereinafter). IGS undertook the original 2008 *Community Needs Assessment for Baltimore's County's Southeast Area*. As the consultant for a number of other community needs assessments, IGS is well positioned to undertake this project in its entirety.

Since IGS's inception in 1997, we have analyzed data and produced plans and reports for numerous entities, including local health departments, county governments, federal agencies, and academic centers. IGS's two principals have cumulative experience of over 30 years producing reports for use of planners locally, regionally, and federally. IGS is adept at presenting complex data in reader-friendly report form, with 14 years of experience preparing surveys for various clients and statistical reports in the fields of public health, social sciences, communication, child welfare, and political science.

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Appendix E: Southeast Network

Mission

The Southeast Network is a coalition of organizations whose focus is to improve the quality of life and health status of Eastern Baltimore County residents. In accomplishing our mission, we will provide an environment that promotes education, training, and advocacy, thereby maximizing the community's potential for health and success.

Vision:

To provide the residents of Eastern Baltimore County with resources, services, and opportunities that support and foster improved quality of life and health status.

Goal:

To identify, through a thorough community needs assessment, the major health concerns faced by Eastern Baltimore County residents. Once identified, each organization within the coalition will tailor their services to the needs of the community and begin the process of community improvement.

Organizational Representation of the Southeast Network	
Abilities Network, Healthy Families Baltimore County Alliance, Inc.	Churches for Streets of Hope
Baltimore County Department of Aging	Community Assistance Network
Baltimore County Department of Health	Community College of Baltimore County
Baltimore County Department of Planning	Creative Kids, Inc.
Baltimore County Department of Social Services	Dundalk Youth Service Centers
Baltimore County Police Department	MedStar Franklin Square Medical Center
Baltimore County Public Library	Johns Hopkins Bayview Medical Center
Baltimore County Public Schools	Streets of Hope
Catholic Charities	The Family Tree
Center for Pregnancy Concerns	Young Parent Support Center