STATE OF MARYLAND
DHMH
Maryland Department of Health and Mental Hygiene
Larry Hogan, Governor - Boyd Rutherford, Lt. Governor - Van Mitchell, Secretary

February 4, 2016

The Honorable Larry Hogan
Governor
State of Maryland
Annapolis, MD 21401-1991

The Honorable Thomas V. Mike Miller, Jr.
President of the Senate
H-107 State House
Annapolis, MD 21401-1991

The Honorable Michael E. Busch
Speaker of the House
H-101 State House
Annapolis, MD 21401-1991

RE: Health-General § 20-1407, 2015 Legislative Report of the Health Enterprise Zones Initiative

Dear Governor Hogan, President Miller, and Speaker Busch:

Pursuant to Health-General § 20-1407, the Maryland Department of Health and Mental Hygiene (the Department) and the Maryland Community Health Resources Commission (the Commission) submit this 2015 report on the progress and accomplishments of the Maryland Health Enterprise Zones Initiative in calendar year 2015.

The Act requires the Department and the Commission to submit an annual report to the Governor and Maryland General Assembly that includes: (1) Number and types of incentives utilized in each HEZ; (2) Evidence of the impact of tax and loan repayment incentives in attracting practitioners to the HEZs; (3) Evidence of the impact of incentives offered in HEZs in reducing health disparities and improving health outcomes; and (4) Evidence of the progress in reducing healthcare costs and hospital admissions and readmissions in HEZs. This information is addressed in the report.

If you have questions or need more information about this report, please contact Allison Taylor, Director of Governmental Affairs, at (410) 767-6481, Mark Luckner, Executive Director, Community Health Resources Commission, at (410) 260-7046 or

Michelle Spencer, M.S., Director, Prevention and Health Promotion Administration, at (410) 767-1454.

Sincerely,

Van T. Mitchell
Secretary

John Hurson
Chairman
Community Health Resources Commission

Enclosure

cc: Michelle Spencer
Mark Luckner
Maura Dwyer
Sarah Albert, MSAR# 9344

MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE

and

COMMUNITY HEALTH RESOURCES COMMISSION

Health General Article § 20-1407
Annotated Code of Maryland

HEALTH ENTERPRISE ZONES

2015 REPORT

Larry Hogan
Governor

Boyd K. Rutherford
Lt. Governor

Van T. Mitchell
Secretary
Department of Health and Mental Hygiene

Honorable John Hurson
Chairman
Community Health Resources Commission

Maryland Health Enterprise Zones (HEZ) Program
2015 Annual Report

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I. Executive Summary

Maryland has a number of advantages that allow its citizens access to quality health care. Despite these advantages, Maryland lags behind other states in several health indicators. Health disparities by race/ethnicity and by place of residence are seen throughout the State. In response, the Maryland Health Quality and Cost Council's Health Disparities Workgroup was charged in 2011 with investigating strategies to reduce and eliminate health disparities. In 2012, their recommendations led to the introduction of SB 234 (Ch. 3 of the Acts of 2012), the Maryland Health Improvement and Disparities Reduction Act of 2012 (the "Act"). The Act created the policy framework to establish and implement the Health Enterprise Zones (HEZs) Initiative. Five HEZs were designated by the Secretary of the Department of Health and Mental Hygiene (DHMH) in January 2013.

The HEZ Statute provides financial incentives to recruit and retain health care providers to HEZs, including loan repayment assistance and income tax credits for newly hired practitioners, and hiring tax credits for the employers of new HEZ practitioners and other qualified employees. As of December 2015, a total of $113,158 has been awarded for the Health Care Practitioner Income Tax Credit and eight HEZ practitioners have been awarded loan repayment.

As a new initiative, Year 1 (April 1, 2013 through March 31, 2014) was primarily dedicated to recruitment of staff, building procurement and renovation, establishment of protocols, and training of practitioners and community resources. The primary focus of Year 2 (April 1, 2014 through March 31, 2015) was linking the unmet need in the HEZ communities with the added provider and community service capacity developed in Year 1. The primary focus of Year 3 (which started April 1, 2015) is on the quality of the added provider and community service capacity. Two and a half years into implementation, the HEZs report expanding capacity to deliver services by opening or expanding 19 health care delivery sites and recruiting 28.5 practitioner full time equivalents (FTEs) to provide services in the HEZs, including 11 licensed independent practitioner FTEs; providing 205,111 visits to 109,938 patients; expanding access to self-management supports and community enabling interventions; and improving health information technology, health literacy, cultural competency, and community capacity. Most of the HEZs, especially those in rural areas, report challenges in recruiting primary care physicians. The HEZs have also confronted challenges in attracting patients and participants, particularly those most at risk, to the new programs and practices; in collecting and reporting individual patient clinical outcomes data; in attempting to measure the marginal impact of their efforts beyond what would have occurred had they not become an HEZ; and in aggregating this data across multiple EMR and paper-based systems.

The HEZs are collecting data on their activities and working to collect health outcomes data to determine the effectiveness of the program. An evaluation of the HEZ Initiative is being conducted by the Johns Hopkins Bloomberg School of Public Health's Center for Health Disparities Solutions. In Year 4, the State HEZ Team will continue to provide technical assistance and work to ensure the HEZs' efforts are sufficiently focused on the legislatively mandated outcomes. The State Team will also work closely with the evaluation team to finalize program impact metrics and with the HEZs to develop and implement a plan to disseminate findings from the HEZ experience.

II. Authorizing Legislation, Funding and Joint Management

A. Maryland Health Improvement and Disparities Reduction Act

Maryland has a number of advantages that allow its citizens access to quality health care. The State has outstanding medical schools, hospitals, and among the 50 states, it has the highest median household income and the second highest number of primary care physicians per 100,000 population. Despite these advantages, Maryland lags behind other states in several health indicators. In America's Health Rankings, a ranking system where 1st is best, Maryland ranked 31st in infant mortality, 30th in cardiovascular deaths, 20th in cancer deaths, and 22nd in obesity prevalence. For these and for other key health indicators, important and persistent health disparities by race/ethnicity and by place of residence exist in the State.

In response to the State's persistent health disparities, the Maryland Health Quality and Cost Council's Health Disparities Workgroup was convened, composed of public health experts, research scholars, and community health leaders, and was charged with investigating strategies to reduce and eliminate health disparities. The Workgroup, led by Dean E. Albert Reece, MD, PhD, MBA, of the University of Maryland School of Medicine (UM SOM), articulated the concept of applying principles of economic development and revitalization to public health and health care delivery. The final report of the Workgroup recommended a range of incentives including tax credits, loan repayment assistance, and grant funding to expand access in underserved areas, reduce health disparities, and improve health outcomes. These incentives would serve to attract primary care clinicians to expand or open practices and would support community-level interventions such as community health workers and other strategies to address social determinants of health. The key recommendation of the Workgroup was the creation of "Health Enterprise Zones," defined as contiguous geographic areas where the population experiences poor health outcomes that contribute to racial/ethnic and geographic health disparities, and are small enough for incentives to have a measurable impact.

In 2012, the recommendations of the Workgroup led to the introduction of SB 234, the Maryland Health Improvement and Disparities Reduction Act of 2012 (the "Act"). The Maryland General Assembly passed SB 234 during the 2012 session, and Governor Martin O'Malley signed the bill into law in April 2012. The purpose of the Health Enterprise Zones (HEZs), enabled by the Act, is to target State resources to: (1) Reduce health disparities; (2) Improve health outcomes; and (3) Reduce health costs and hospital admissions and readmissions in specific areas of the State. The Act created the policy framework to establish and implement the HEZ Initiative. Funding for this initiative was placed in the budget of the Maryland Community Health Resources Commission (CHRC) consistent with their charge to direct resources to communities where poor health persists despite ongoing services provided by the public and private sectors. The Department of Health and Mental Hygiene (DHMH) was charged to apply their public health expertise in Core Public Health Services and their State authority to ensure, through *assessment, policy development, and assurance*, that quality, safe and effective health services are delivered. The Maryland General Assembly authorized the two organizations (DHMH and CHRC) to collaborate in implementing provisions of the HEZ Initiative.

B. Funding and Resources

The Act provides $4 million per year over the four-year duration of the HEZ Initiative and creates the HEZ Reserve Fund, a special, non-lapsing fund which is administered by CHRC. The Act provides access to a range of incentives and resources for the HEZs, including: (1) Income tax credits; (2) Hiring tax credits; (3) Loan repayment assistance; and (4) Grant funding provided by the CHRC. In addition to these incentives and resources, the State also supports the HEZs with specific technical assistance (TA) and program guidance, which are described in more detail in section V of this report.

C. DHMH and CHRC Shared Management

Members of the State HEZ Team include leaders in DHMH from the Prevention and Health Promotion Administration (PHPA), Office of Minority Health and Health Disparities (OMHHD), and the Virtual Data Unit (VDU). The HEZ Team meets frequently, working together to establish guidelines for implementation, reporting, budget expenditure guidance, and TA. PHPA's Office of Primary Care Access guides the Loan Repayment project, and PHPA's Center for Chronic Disease Prevention and Control provides chronic disease guidance. The OMHHD provides resources and expertise for cultural competency assessment and training, and the VDU, along with the entire HEZ Team, assists with identifying performance and program evaluation metrics. CHRC staff provides oversight and accounting of HEZ fiscal resources.

III. HEZ Implementation

A. Solicitation and Designation

After the Act was signed into law, DHMH and the CHRC held a public comment period to solicit feedback on the selection criteria for the HEZs, the potential uses of HEZ funding, and the outcome metrics that should be developed to monitor the progress and implementation of the HEZs. Public comments were incorporated into the Call for Proposals issued by CHRC. Under the Act, non-profit community-based organizations or local government agencies were eligible to apply for HEZ designation status on behalf of a local community. Applicants were encouraged to reflect inclusion, community participation, and collaboration and to support the priorities identified by Local Health Improvement Coalitions. Applications must have demonstrated need and intervention strategies to improve health outcomes in the potential Zone. The Call for Proposals generated a total of 19 applications from 17 jurisdictions, representing rural, urban, and suburban areas of the state. These applications were evaluated competitively on 13 review principles by an independent HEZ Review Committee comprised of experts in the fields of public health, health care finance, health disparities, and health care delivery. On January 24, 2013, based on recommendations from CHRC, DHMH Secretary Sharfstein designated Maryland's first five HEZs.

B. HEZ Legislative Expectations, Logic Model and Deliverables

The HEZs enabling legislation established the following expectations for Health Enterprise Zones:

Health improvement strategies:

- Increase health care provider capacity (attract practitioners to the HEZs)
- Improve health services delivery
- Effectuate community improvements
- Conduct outreach and education

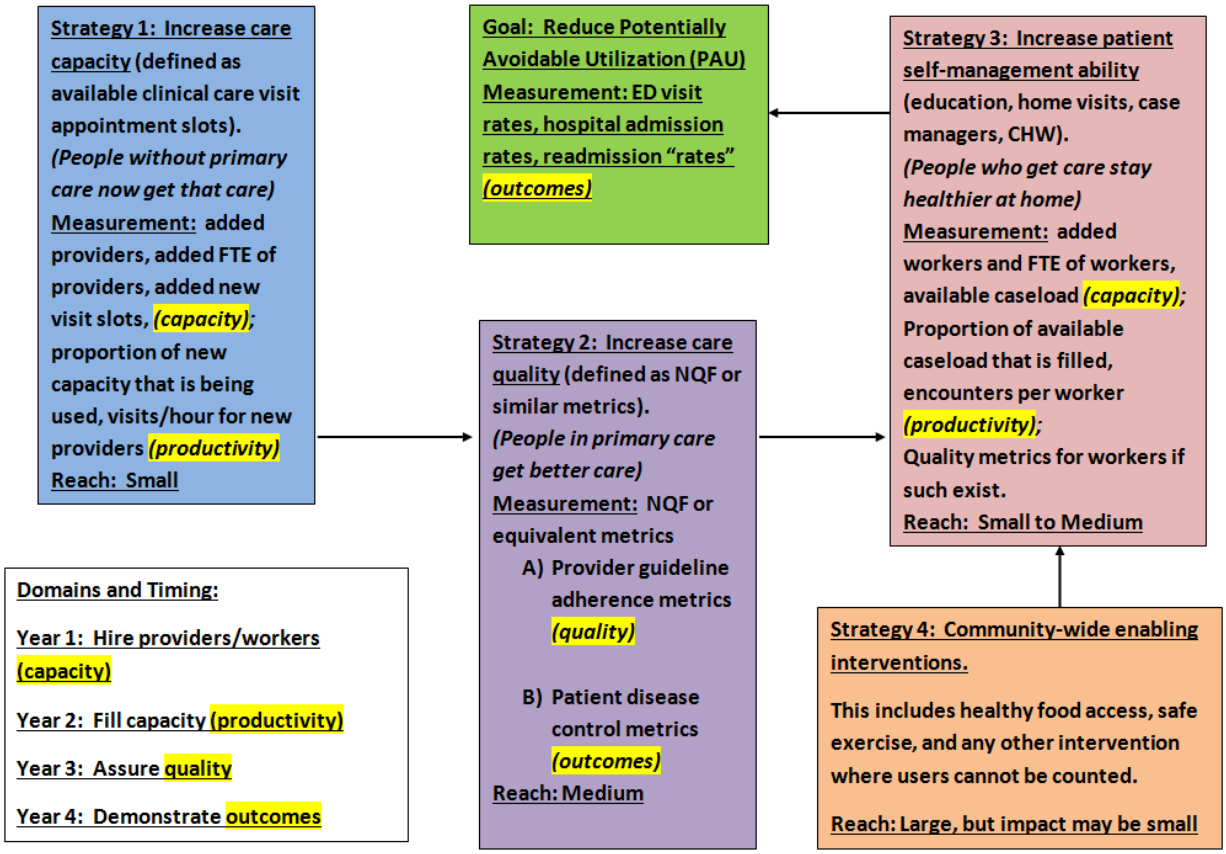
Health outcome expectations:

- Improve health outcomes
- Reduce health disparities (and implicitly, improve minority health)
- Reduce health care costs and hospital admissions and readmissions

Emergency department (ED) visit rates and hospital admission and readmission rates can be strongly affected by the degree of success with which patients can manage their chronic diseases at home. Therefore, a key strategy of the HEZs is to optimize patient self-management of chronic disease (Figure 1). The factors that are required for successful chronic disease management include:

1. **Access to a provider.** Access involves both affordability (insurance) and availability (provider in the vicinity, who takes one's insurance, and has convenient hours).
2. **Quality care.** Quality care requires that a provider accurately assesses the patient's health issues and develops the appropriate evidence-based treatment plan. Providers should follow established chronic disease management guidelines.
3. **Patient-provider communication and patient education.** Proper communication and education make it possible for a patient to follow the instructions of a provider after leaving the office. Without the necessary information, patients may not be able to follow the treatment plans.
4. **Community supports for self-management.** Community support, which includes the involvement of case managers and community health workers, provides at-home support, allowing for patients to comply with their treatment plans.

Figure 1. HEZ Logic Model



Every activity of a HEZ concentrates on promoting at least one of the above strategies, with the goal of achieving one or more of the health outcome expectations. The strategies have a logical temporal sequence, which maps onto the four years of the HEZ project as follows:

- **Year 1:** Focus on **capacity expansion**, including HEZ practitioners and Community Health Workers (CHWs)/case managers. Priority activities included recruitment and training.
- **Year 2:** Focus on **productivity** of HEZ practitioners, programs and CHWs/case managers to utilize the new capacity, ideally with the neediest patients. Priority activities included program development, outreach, and additional training.
- **Year 3:** Focus on the **quality** of care provided by HEZ practitioners and CHWs/case managers. Priority activities include defining relevant metrics for CHWs/case managers and NQF or similar metrics for providers.
- **Year 4:** Focus on **health outcomes**, namely hospital utilization and cost reductions. While tracking systems for this will have evolved over all four years, it is likely only in Year 4 that the intervention is mature enough (if Years 1 to 3 have been successful) to be making a difference.

Thus, as a new initiative, Year 1 (April 1, 2013 – March 31, 2014) of the program focused on capacity expansion, including the recruitment of staff, establishment of protocols, and training and recruitment of practitioners and community resources, such as CHWs. The primary focus of

Year 2 was linking unmet need in these communities with the added provider and community service capacity developed in Year 1. The primary focus of Year 3 (which started April 1, 2015) is on the quality of the added practitioner and community service capacity. The next section details the HEZs' progress to date in these areas.

C. Overview of the Progress of the Five HEZs

The five HEZs (Figure 2) made significant progress in their efforts to expand and fill capacity with the neediest patients during the first two years of implementation and are now concentrating their efforts on the quality of the new capacity.

Figure 2. Map of the Five HEZs

Annapolis/Morris Blum (Suburban)
Jurisdiction: Anne Arundel County
Community: Annapolis, Morris Blum Public Housing Building (and zip code 21401; population 36,805)
Coordinating Organization: Anne Arundel Medical Center (AAMC)
Project Title: Annapolis Community Health Partnership (ACHP)

Goals and Intended Outcomes. ACHP goals include establishing a trusted source of primary care within the Morris Blum senior housing facility for its residents and the surrounding community, and screening and treating patients for cardiovascular risk factors, including diabetes, hypertension, hyperlipidemia, obesity and smoking. By addressing risk factors and managing chronic disease, ACHP expects to reduce preventable 911 calls, ED visits, hospital admissions and readmissions for the population served.

Target Community. The geographic area served by ACHP encompasses a neighborhood just blocks from State Circle in Annapolis. The Morris H. Blum building itself was a microcosm of a persistent pocket of unmet need. Its 184 elderly and disabled residents had been experiencing

crisis-driven, episodic, and fragmented care. Data from local resources revealed that in one year there were 220 medically-related 911 calls from the Morris Blum building. In six months alone, 73 Morris Blum residents experienced 175 ED visits, with 38 resulting in admissions. Fewer than ten Morris Blum residents accounted for 41% of those 175 ED visits.

Key Interventions and Milestones to Date (see ACHP program data in Appendix A, Table 1.). ACHP reports adding 4 FTEs, including 1 licensed independent practitioner FTE and 1 other licensed or certified health care practitioner FTE, to support the new Morris Blum clinic. The clinic opened in October 2013 in the Morris Blum building, and as of September 30, 2015, has provided 4,440 patient visits to 2,709 patients who live in the Morris Blum residence and the surrounding community, and has been able to reduce medical 911 calls, ED visits, and admissions and readmissions among individuals living at the Morris Blum residence (see Table 1. below). Further, AAMC reports that in 2014, 13 Morris Blum residents called 911 more than five times in one year (and some more than 13 times). In 2015, that number decreased to only five Morris Blum residents calling 911 more than once and no residents making more than six calls.

Table 1.Hospital Utilization Visits and Events Among Morris Blum Residents, FY 2013-2015

	AAMC FY 2013	**AAMC FY 2014**	**AAMC FY 2015**
AAMC Admission events	82	84	48
AAMC Readmission events	16	20	4
AAMC ED Visits	179	190	148
911 calls	199	195	146

To improve coordination of care, this new practice has been supported by AAMC's integrated electronic medical record (EMR), which is shared by the hospital and multiple specialty practices. The AAMC's integrated EMR allows for identification of patients who have been an inpatient or visited the ED and for the development of diabetes and coronary artery disease patient registries. A new initiative identifies patients in the ED who are uninsured and need follow-up, and links these "medically homeless" patients to the Morris Blum clinic. Diabetes self-management classes have been provided for 62 individuals and smoking cessation workshops have been provided for 107. The clinic includes onsite lab services to enhance the likelihood that patients receive needed medical testing as well as care coordination services, which have been provided to 165 patients as of September 30, 2015.

A collaborating mental health provider helps integrate behavioral health with ACHP's primary care medical home (PCMH). Annual depression and behavioral health screens are incorporated into the primary care work flow with access to specialty behavioral health care within 48 hours if necessary. Additionally, as of September 2015, ACHP will collaborate with an alternative school for children with behavioral issues to help meet the primary care needs of the children and their families. Annual domestic violence screenings, using a 3-question universal screening tool, have been embedded into the EMR and were initiated at the Morris Blum clinic in July 2015. Vulnerable ACHP patients also benefit from home visits by the doctor, which are supplemented by CHW interventions provided by a collaborator. Family meetings are held to discuss goals of care for those with advanced complex illnesses and ACHP has developed a number of public

health programs to support residents and clinic patients in their self-management efforts. Blood pressure screenings, medication reconciliation, nutrition classes, and walking groups have served over 3,000 participants and are integral components of the program. ACHP has also collaborated with OMHHD to provide cultural competency training to Morris Blum and AAMC staff and has implemented a Community Health Improvement Committee to assess neighborhood needs and develop and implement targeted education and screening programs for underserved communities in Annapolis. Finally, HEZ staff and Morris Blum residents actively participate in AAMC's Healthy Equity Subcommittee to develop and implement patient activation programs geared toward underserved populations.

Dorchester/Caroline Counties (Rural)
Jurisdiction: Dorchester and Caroline Counties
Community: Mid-Shore Region (zip codes 21613, 21631, 21643, 21835, 21659, 21664, 21632; population 36,123)
Coordinating Organization: Dorchester County Health Department
Project Title: Competent Care Connections (CCC)

Goals and Intended Outcomes. The Caroline/Dorchester CCC HEZ's goals are to: (1) Improve outcomes and reduce risk factors related to diabetes, hypertension, asthma and behavioral health; (2) Increase the primary care workforce; (3) Increase the community health workforce; (4) Increase community health resources, access to healthy food, safe physical activity and support for optimal mental health and addiction recovery; (5) Reduce ED visits and hospitalizations for diabetes, hypertension, asthma and behavioral health; and (6) Reduce unnecessary health care costs related to ED visits and preventable diseases.

Target Community. The CCC HEZ encompasses seven contiguous zip codes in the rural counties of Caroline and Dorchester. Data from Maryland's State Improvement Process (SHIP) website and DHMH OMHHD indicate that heart disease, cancer mortality, and ED visits in the HEZ due to diabetes, hypertension, and behavioral health are higher than the overall State rates. Significant disparities exist between racial/ethnic groups and geographic locations. ED visits among African Americans for these conditions were markedly greater than among Whites in both counties and were much higher than Maryland averages.

*Key Interventions and Milestones to Date (see CCC program data in Appendix A, Table 2)***.** The HEZ has expanded the primary care workforce by adding 25.98 FTEs in the HEZ as of September 30, 2015, including 4.3 licensed independent practitioner FTEs and 6.8 other licensed or certified health care practitioner FTEs. As of September 2015, these HEZ programs and practices have provided 15,915 visits and encounters to over 2,500 patients and clients across the HEZ. Care coordination services have been revamped and as of September 29, 2015, are provided through a full time HEZ Care Coordinator at Choptank Community Health System, Inc. (a Federally Qualified Health Center, or FQHC), which has two clinics in the HEZ. Care Coordination efforts are targeted to those who have been hospitalized or in the ED and high utilizers (defined by CCC as those who have had three visits to the ED within 30 days for the same condition) are linked to a Community Health Outreach Worker (CHOW) to help find needed services, such as insurance and transportation. A new HEZ electronic health record (EHR), which went live in October 2015, enables HEZ partners to identify high utilizers, share

information about patients, and track the use of clinical services, community resources and referrals.

A new HEZ-supported asthma program, "Breathe Easy: a Comprehensive, Evidence-Based School Based Health Center Model for Asthma Improvement" is being implemented in the HEZ and community-wide enabling supports (such as programs that promote food access, weight management and physical activity) for patients with high hospital utilization due to chronic disease have been expanded and are expected to improve patient compliance and decrease ED visits and admissions for chronic disease. CCC reports that 551 patients have participated in care coordination, peer recovery support and weight management programs as of September 30, 2015. The expanded Mobile Crisis Team (MCT) served 404 individuals and has reduced response time to mental health crises in Caroline and Dorchester Counties from over one hour prior to the HEZ's expansion of the MCT, to 25 minutes in September 2015. Expanded outpatient behavioral health services for adolescents through School Based Wellness Centers in Caroline and Dorchester Counties have provided services to 248 students and an adult mental health clinic was opened with HEZ support in Federalsburg in November 2015. CHOWs have provided education or health screenings to over 1,500 individuals. CCC also reports that training in cultural competency and health literacy is ongoing for all CCC HEZ partners.

Greater Lexington Park/ St. Mary's County (Rural)
Jurisdiction: St. Mary's County
Community: Greater Lexington Park (zip codes 20653, 20634, 20667; population 34,035)
Coordinating Organization: MedStar St. Mary's Hospital
Project Title: Greater Lexington Park Health Enterprise Zone (GLP HEZ)

Goals and Intended Outcomes. The goals of the GLP HEZ include: (1) Expand and integrate the primary care and community health workforce through the recruitment of primary care, behavioral health, and dental service providers in the HEZ; (2) Reduce unnecessary ED usage and costs for hypertension/high blood pressure, asthma, and diabetes, and reduce unnecessary readmissions for congestive heart failure and chronic obstructive pulmonary disease; (3) Improve health outcomes for racial and ethnic minority populations in the HEZ through the implementation of culturally competent promising practices and evidence-based approaches in health promotion; and (4) Increase community resources in the HEZ that will facilitate access to local health care and human services and improve the physical environment of the HEZ.

Target Community. According to 2010 U.S. Census data, approximately 28% of the county population lives in Greater Lexington Park, 31.6% of whom are African American/Black and 7.4% of whom are Hispanic. Residents of Greater Lexington Park have a lower per capita income and a higher unemployment rate than the rest of the County, and the area significantly lacks primary care providers. Medicaid panels are closed in most practices and uninsured and underinsured residents are forced to seek both primary and crisis care in the ED. According to MedStar St. Mary's Hospital (MSMH), 30.57% of patients accessing the ED in FY 2012 were from the HEZ zip codes.

Key Interventions and Milestones to Date (see the GLP HEZ program data in Appendix A, Table 3). The GLP HEZ has added 16.2 FTEs in the HEZ, including 2.5 licensed independent

practitioner FTEs and 3.2 other licensed or certified health care practitioner FTEs. These practitioners, along with existing provider resources, have collectively provided 15,183 visits to 2,249 patients through their enhanced HEZ practices. This includes patients served at MSMH's *Get Connected to Health* mobile clinic, which has been providing in-kind primary care services, integrated with Walden Sierra behavioral health services, to patients who live in the HEZ until the new Community Health Center is opened in the HEZ. The GLP HEZ postponed the opening of its new Community Health Center due to challenges with site procurement, but facilitated the opening of a primary care office in September 2014 to provide services to HEZ residents while the Community Health Center is under construction. Despite high staff turnover, this practice provided services to 337 patients as of September 2015. Walden Sierra provided behavioral health services to 1,780 patients as of September 2015 and was able to place a buprenorphine certified psychiatrist in the HEZ to assist with opiate addicted patients who overuse ED services. Walden Sierra has also implemented the E-Prescribe prescription system to assist with medication prescription and refill processes and to reduce lost or misplaced prescriptions, which may also put patients at higher risk of ED use.

The GLP HEZ's care coordination program provides medical stability to at-risk patients, including social support and navigation services, through 2.5 FTE Neighborhood Wellness Advocates (NWAs) and 1.5 FTE nurse care coordinators. The care coordination program has served 956 patients to date through home visits, clinic appointments and phone calls, and provided outreach to 5,756 individuals. High utilizers identified through a daily ED visit report and a daily discharge report are assigned to NWAs and assessed for risk of hospitalization or readmission. The NWAs and nurse care coordinators then reach out to these individuals to assist in developing and attaining self-management goals. Education is provided through evidence-based programs to increase self-management skills for targeted diseases. The care coordination efforts are supported by an outpatient care coordination software system, which is linked to the hospital's EMR, to document all encounters with assigned patients and facilitate communication among providers.

The GLP HEZ developed a 16-stop Mobile Medical Route, which has provided 8,997 rides to medical appointments, pharmacies, grocery stores, parks, and other human services as of September 2015, and has equipped a mobile dental van, which provided services to 58 patients. The HEZ transportation program has expanded to include a specialty service dedicated to transporting clients to doctors' appointments inside and outside the HEZ and has experienced more demand than is possible to meet.

While the population in the GLP HEZ increased since 2012, the year prior to the start of the HEZ Initiative, all-cause ED visit counts (see Table 2. below), and thus rates (see Section IV.B.), have decreased. All-cause ED visit rates have not decreased among African Americans, however (see Section IV.B.). The percentage of patients accessing the ED who were from the HEZ zip codes remained unchanged over that same time period, at just over 30%. This is consistent with the approximately one-third of the county population who lives in the HEZ.

Table 2. ED Visit Counts, HEZ and MedStar St. Mary's Hospital

	ED Visits, HEZ	Total ED Visits, MedStar St. Mary's Hospital	Percent of patients accessing the ED who were from the HEZ
FY2015	16,027	52,465	*30.50%*
FY2014	16,131	53,084	*30.39%*
FY2013	17,063	56,806	*30.04%*
FY2012	17,422	57,394	*30.36%*

Prince George's County Health Department/Capitol Heights (Suburban)
Jurisdiction: Prince George's County
Community: Capitol Heights (zip code 20743; population 38,626)
Coordinating Organization: Prince George's County Health Department
Project Title: Prince George's County Health Enterprise Zone (PGCHEZ)

Goals and Intended Outcomes. PGCHEZ seeks to achieve the following primary goals by December 31, 2016: (1) Increase accessibility and availability of primary care services in zip code 20743; (2) Improve health outcomes for the residents of zip code 20743; (3) Increase the number of CHWs delivering services; (4) Increase community resources for health; and (5) Reduce preventable hospitalizations and ED visits.

Target Community. Capitol Heights leads the county in poor health outcomes including low birth weight infants, late/no prenatal care, and teen births. The proportion of Capitol Heights residents living below the federal poverty level and 50% below the level are 13.6% and 6.3%, respectively, in contrast to 7.9% and 3.9% for the county. Twenty-three percent of residents have not completed high school. The national median for violent crimes is 4 per 1,000 residents, but in zip code 20743, it is 5.5 per 1,000. The Medicaid enrollment and WIC participation rates in the HEZ exceed State rates. Inappropriate hospital utilization is also a problem for Capitol Heights, which leads the county in ambulatory care-sensitive hospital admissions.

Key Interventions and Milestones to Date (see the PGCHEZ's program data in Appendix A, Table 4). PGCHEZ's key program interventions include expanding the primary care workforce in the HEZ to staff five newly established PCMH hubs and their satellite offices. As of September 2015, clinics operated by Global Vision and Gerald Family Care have been opened, and Greater Baden Medical Services (an FQHC) and the Prince George's County Health Department have been expanded through the addition of 16.2 FTEs, including 3.2 licensed independent practitioner FTEs and 6.5 other licensed or certified health care practitioner FTEs. These HEZ practitioners and their enhanced practices have provided 41,325 visits to 22,697 patients. The HEZ's fourth and fifth PCMHs are scheduled to be open by the end of Year 3 of the HEZ Initiative, in the spring of 2016.

The PGCHEZ is also working to improve the quality of primary care by promoting the use of a Wellness Plan, an individualized care plan integrated into each patient's EHR. Plans have been created for 827 HEZ patients across the three HEZ PCMHs. The PGCHEZ CHWs work with the Prince George's County Health Department's Medical Mall care coordination hospital transition

team to prevent hospital readmissions among HEZ residents. As of September 2015, 723 patients have been served through the CHW care coordination program. A preliminary analysis of outcome data for the CHW services (anticipated to be completed in summer 2016) indicate that CHW clients who are high utilizers of ED and hospital inpatient services experienced a 45% decline in the number of ED and hospital visits from baseline to follow-up three months later. The PGCHEZ also initiated a Community Care Coordination Team (CCCT) in October 2015 with partners from around the county, including faith-based and social service organizations, community centers, community-based organizations, hospitals, private practices, and FQHCs, among others, who help manage patients. Patients are elevated to the CCCT if gaps remain following CHW intervention. The care coordination efforts are supported by a new web-based case management software system, Provider Link, which documents client assignments, case management activities, resource connections, and utilization of health care services.

The PGCHEZ developed a county Public Health Information Network (PHIN) which is linked to one of Maryland's health information exchanges, CRISP, and allows for laboratory, radiology and clinical records to be delivered to HEZ providers from hospitals and for the sharing of immunization information with DHMH. The PGCHEZ is currently finalizing PHIN connectivity to the HEZ's PCMHs, and to several partner organizations and clinics in Maryland and Washington, DC. The PGCHEZ is also working to ensure cultural, linguistic and health literacy competency of HEZ operations by launching a comprehensive health literacy campaign and requiring all HEZ providers and their staff to complete cultural competency training. The health literacy campaign designed, produced and disseminated thousands of health literacy cards, booklets and kits to HEZ residents. Finally, the HEZ evaluation team is conducting two surveys, a CHW client satisfaction survey, with 100 HEZ CHW clients, and a PCHM patient satisfaction survey, with 100 patients of the HEZ's PCMHs.

West Baltimore Primary Care Collaborative (Urban)
Jurisdiction: Baltimore City
Community: West Baltimore (zip codes 21216, 21217, 21223, 21229; population 137,823)
Coordinating Organization: Bon Secours Baltimore Health System
Project Title: West Baltimore Primary Care Access Collaborative (WBPCAC)

Goals and Intended Outcomes. WBPCAC has committed to improve health outcomes in its targeted areas with the following specific and quantifiable goals: (1) Successfully connect 1,125 high utilizers to a CHW and provide prolonged support to 450 high utilizers; (2) Complete 4,725 CHW encounters via home visits, phone, health screenings and clinic visits; (3) Successfully connect 100 high utilizers to a primary care provider; (4) Increase by 3% the percentage of WBPCAC hypertensive adult patients with blood pressures lower than 140/90 mmHg; (5) Increase by 3% the percentage of WBPCAC diabetic adult patients with blood sugar under control; (6) Increase by 3% the percentage of WBPCAC diabetic adult patients with LDL-C < 100 mg/dL; (7) Complete biometric screens with 10% of fitness class participants; (8) Increase by 16 the number of skilled primary care professionals on HEZ provider practices' care teams; (9) Reduce by 5% the number of preventable ED visits among high utilizers enrolled in the WB CARE care coordination program; (10) Reduce by 5% the number of preventable hospitalizations among high utilizers enrolled in the WB CARE care coordination program; (11) Reduce by 5% the number of preventable readmissions among high utilizers enrolled in the WB

CARE care coordination program; and (12) Reduce by 10% unnecessary costs of caring for high utilizers in the WB CARE care coordination program.

Target Community. The targeted area fully or partially includes 16 neighborhoods which, combined, have higher disease burden than most other communities in Maryland and establish the lower extremes for health disparities in Baltimore City and the State across all major chronic illnesses. Further contributing to poor health outcomes is inadequate access to health care services, earning the community's designation both as a medically-underserved area and medically-underserved population. African-Americans make up more than 81% of the population, compared to 30% and 63% in Maryland and Baltimore City, respectively. The high percentage of African-American and low-income residents in the HEZ, where median household income is $31,749 compared to $72,483 in Maryland overall, contributes to the disproportionate prevalence of ethnically- and socioeconomically-linked health conditions such as diabetes, obesity, asthma, and low birth weight.

Key Interventions and Milestones to Date (see the WB CARE program data in Appendix A, Table 5). WBPCAC has improved access to and the quality of health care by adding 11.3 FTEs in the HEZ. The 'Jobs Added' numbers for WBPCAC have been revised downward from previous estimates due to a change in reporting definitions during Year 2. WBPCAC's efforts to build capacity in the target zip codes have also included obtaining income tax credit (totaling $91,263) and loan repayment support (for 6 practitioners) to work in the HEZ; facilitating PCMH trainings for clinical partners; providing 43 scholarships for HEZ residents pursuing health and social service professions; conducting CHW, cultural competency and other trainings; and enabling enhanced care plans for HEZ residents among HEZ clinical partners due to the many self-management and community supports provided through the HEZ. The HEZ enhanced practices have collectively provided 128,248 visits to 79,759 patients who reside in the HEZ.

WBPCAC deployed 5 CHW FTEs in the HEZ who have reported 8,874 encounters with patients and has revised how they use CHWs as a result of a re-design of their care coordination program. The CHWs serve as liaisons to 3 partner hospitals (with 2 more in process) and engage patients, through home visits and phone calls, in a two-tiered care coordination program. The program focuses on hospital-to-community transitions and development of a care plan to prevent high utilizers from being readmitted to the hospital or using the ED within 30 days post discharge (Tier I). Tier II includes high utilizers who are in need of prolonged support beyond the 30 days. The CHW team is led by a nurse care coordination manager and the program is supported by a web-based data platform that uses a validated health screening tool to predict risk of hospital readmission and ED utilization within 30 days of discharge. As of September 2015, WBPCAC reports enrolling 249 high utilizers in the Tier I intervention and 111 in the Tier II intervention. The readmission rate among those enrolled is currently 13%, down 5.1% since 2014, with an average of 5.6 calls and 1 home visit per client while the patient is enrolled.

A chronic disease self-management course has been implemented, with 230 participants reported as of September 30, 2015, and fitness classes have been provided to 1,929 HEZ residents. Finally, 4,736 residents have enrolled in the HEZ's Passport to Health program, which enables tracking of the utilization of HEZ programs and services.

D. Year Three Successes

Expanding capacity to deliver services. Across all five HEZs, 19 health care delivery sites (defined as locations where medical, dental or mental health assessments and disease management can be provided) have been opened or expanded to provide primary care, dental and/or behavioral health services. These health care delivery sites include private practices, hospital clinics, FQHCs, mobile clinics, school-based wellness centers, and behavioral health clinics.

HEZ practitioners provide primary care, dental or behavioral health services in the HEZ, due to the efforts of the HEZ Initiative. They may or may not receive HEZ funding. The HEZs have successfully recruited 28.5 HEZ practitioner FTEs as of September 30, 2015, including 11 licensed independent practitioner FTEs (which includes physicians, psychiatrists, physicians assistants and advanced practice nurses) and 17.5 other licensed or certified health care practitioner FTEs (which include registered nurses, licensed clinical social workers, certified medical assistants, and certified addictions counselors). The HEZs collectively reported a total of 15.45 CHW FTEs and 73.68 total FTEs added in the HEZs. The 'Jobs Added' numbers have continually been revised downward from previous estimates due to a change in reporting definitions following a data audit by the State HEZ Data Team. Recruitment and retention efforts in the HEZs have been enhanced through the HEZs' efforts to help practitioners and other qualified employees obtain income tax credits. Through December 2015, tax credit awards total $113,158 and loan repayment support has been provided for eight practitioners.

Expanding capacity to deliver services in the HEZs has also included a variety of system-level efforts to better coordinate, integrate and increase access to patient-centered care in the HEZs, especially for complex patients. These efforts include PCMH, CHW, and cultural competency trainings, among others; co-locating practitioners and services in HEZ clinical sites; enabling enhanced care plans among HEZ clinical partners for HEZ patients due to the many self-management and community supports provided through the HEZ; expanding clinic hours and walk-in appointment availability; enhancing and linking HEZ data systems to facilitate data sharing, communication, timely access to care and medications, and co-management of complex patients; using population health tools, such as disease registries, to identify, monitor and manage patients with chronic diseases; increasing use of language lines and CHWs to reduce language and cultural barriers; providing scholarships to HEZ residents pursuing health and social service professions to increase the local health care workforce pipeline; ensuring timely appointments with care coordinators following ED visits or inpatient admissions; and using individual level data, including race and ethnicity, to identify disparities and target medical, social, and systems interventions.

Providing new or expanded primary care, behavioral health and dental services in the HEZs. A total of 205,111 patient visits were provided by HEZ practitioners and their enhanced practices to 109,938 patients between October 1, 2013 and September 30, 2015.

Expanding access to self-management supports and community enabling interventions. Care Coordination programs have been developed and implemented in all five HEZs. These programs employ community health workers and nurse case managers to identify and engage 'high

utilizers,' provide home visits, and connect patients to primary care, behavioral and other health and social services. These programs have been enhanced in Year 3 through the development of sophisticated web-based data systems that facilitate the identification, monitoring, and management of at-risk patients. Community enabling interventions such as disease self-management, medication reconciliation, and weight management programs; smoking cessation workshops; fitness classes; walking groups; nutrition classes; blood pressure, behavioral health, domestic violence and diabetes screenings; health education and outreach; health literacy campaigns; and transportation support have also been developed or expanded in the HEZs.

Improving health information technology. All HEZs have made significant improvements in health information technology infrastructure and capacity, including the development of "patient-tracker" data systems, a county-wide health information exchange, and care coordination software applications to facilitate the identification, monitoring, and management of at-risk patients. The HEZs are also working with HEZ practices to help them transition to and link EMRs.

Improving cultural competency. All HEZs have completed the OMHHD cultural competency trainings. These trainings focus on the national Culturally and Linguistically Appropriate Services (CLAS) standards, efforts to promote workforce diversity and health literacy, and steps to becoming more culturally and linguistically competent.

Enhancing community capacity. All HEZs are convening and engaging the participation of HEZ partners and residents through the HEZ coalitions and community advisory boards. Further, the HEZ coalitions have demonstrated significant ability to be responsive to the State, their partners and their communities, and to successfully adapt to a changing health care environment.

E. Year Three Challenges

The HEZs have encountered challenges while implementing their work plans. The State HEZ Team is working closely with the HEZs to address these and other challenges through the provision of technical assistance (see Section V)**.** Key challenges, and strategies to overcome them, include:

Practitioner recruitment challenges. While utilization of the HEZ income tax credits increased significantly in Year 3 and recruitment and retention efforts improved across the HEZs, some HEZs, especially in rural areas, continue to report challenges in recruiting practitioners. Loan repayment assistance is limited due to program requirements, such as the Janet L. Hoffman Loan Assistance Repayment Program requirement that recipients attended a university in Maryland. HEZs have requested more flexibility in the types of recruitment and retention incentives they can provide.

Strategy: HEZs were permitted to utilize funding that was budgeted by the HEZs for tax incentives to provide hiring and productivity bonuses to HEZ practitioners who couldn't benefit from, but otherwise qualified for, the HEZ hiring incentives. DHMH increased marketing efforts and technical assistance to the HEZs regarding the loan repayment programs and HEZ tax credits

in 2015. These efforts likely contributed to the significant increase in tax credit applications for tax year 2014.

Attracting patients and participants to the new HEZ practices and programs. While each of the HEZs experienced challenges in attracting patients and participants to the new HEZ practices and programs, several strategies were successfully employed in Year 3 to address these challenges. These challenges include but are not limited to: educational and health literacy barriers among target patients; changing patient health care utilization patterns; lack of awareness of the new programs and services; and lack of transportation to new practices and programs, among others.

Strategy: The State HEZ Team worked with the HEZs to define service volume targets that are appropriate for the service type and to better understand and remove barriers to service uptake in the community. In some HEZs this required staffing changes; in several HEZs it required delegating certain activities to experts via contracts or through the use of evidence-based models and approaches. The HEZs were also successful in the development of data platforms that facilitate the identification, engagement and management of high utilizers. This data enables providers to link their "high utilizer" patients with HEZ services and programs. Further, the HEZs used program data to establish appropriate targets for CHW outreach and case management, and several CHW programs were expanded to enhance outreach to link their target populations to HEZ programs and services.

Collecting data across multiple provider sites. Most of the HEZs include multiple care delivery sites and practitioners. Not all sites have EMR systems. The HEZs are confronting the challenges involved with collecting and reporting individual patient clinical outcomes data and aggregating this data across multiple different EMR systems and paper-based systems.

Strategy: While this remained a challenge for several HEZs in Year 3, overall the HEZs have made significant progress in this area. Four HEZs have developed their own "patient tracker" systems to enhance HEZ care coordination efforts and will soon be able to report utilization and outcomes data among HEZ patients across the HEZs' programs and services.

ED Visit Rates: Hospital admissions for ambulatory care sensitive conditions that are potentially avoidable and all-cause unplanned readmissions both decreased between 2009 and 2014 in Maryland and in four of the five HEZs. All-cause ED visit rates increased slightly for Maryland and four HEZs from 2009 to 2014 (see Section IV.B.). This is consistent with state and national data, and is likely due to several factors. These factors include individuals who lost their health insurance and needed to re-apply; lack of transportation to routine, preventive and urgent care; and individuals who delayed care due to a lack of health insurance.

Strategy: The HEZs have employed several strategies to combat this challenge. Strategies have included expanding care coordination programs beyond hospital-to-community transitions following inpatient admission to include patients who have utilized the ED. HEZs have also worked to embed services, such as behavioral health services, in EDs; to improve access to medications through electronic prescription services; to expand access to physicians certified to prescribe buprenorphine; and to expand transportation services, especially in the rural HEZs.

Complex patients: There is limited peer-reviewed research literature to date regarding evidence based approaches to identifying, engaging and managing high utilizers. Further, there is limited understanding of patterns of utilization among high utilizers, which may be driven by a number of factors, and the implications for program design. For example, persistent high utilizers would likely require different targeting and interventions than those with limited episodes of high utilization. Key questions regarding program design and effectiveness remain, including which patients can be effectively engaged in care, which utilization is modifiable, when services should be short term versus ongoing, which patients benefit from which services, and where the services should be based or delivered. The HEZs have been met with similar questions and challenges in the design and development of care coordination programs for medically and socially complex high utilizer patients.

Strategy: The HEZs have employed a number of strategies to improve identification and care for high utilizer patients. Several HEZs replicated promising practices and approaches from other states; one HEZ contracted out their care coordination services to a Maryland organization with significant care coordination experience and an evidence-based approach. The HEZs have also developed data platforms that facilitate the identification, engagement and management of high utilizers, as well as quality improvement processes to inform continued program development. The HEZs have provided extensive training to HEZ staff and practitioners to improve their ability to manage complex patients, including Mental Health First Aid, Healthy Eating on a Budget, Motivational Interviewing, Asthma Management, Cultural Competency, Healthy Literacy, The Affordable Care Act, and Integrated Interagency Care, among others. Finally, the HEZs have increased efforts to recruit and integrate mental health professionals, including psychiatrists, social workers and behavioral interventionists, into the efforts of the HEZs.

IV. Measuring Progress

A. Incentives Available to the HEZs and the Impact of Incentives in Attracting and/or Retaining Practitioners to the HEZs

The HEZ Initiative provides a range of public incentives and resources to help attract private health care practitioners to serve in underserved communities. These incentives include tax credits and loan repayment. Tax credits and loan repayment were included in the HEZ statute as incentives for recruiting and retaining providers in these underserved areas. The Act requires DHMH and the Commission to include in the annual report to the Governor and Maryland General Assembly the number and types of incentives utilized in each HEZ, and evidence of the impact of tax and loan repayment incentives in attracting practitioners to the HEZs. This information is provided below. The Act also requires the annual report to include evidence of the impact of incentives offered in the HEZs in reducing health disparities and improving health outcomes. Important outcome measures by which to assess this improvement, specified in statute, are hospital admission rates, readmission rates, and hospital costs (see section IV.B.).

Loan Repayment

Loan Repayment Assistance was provided in the HEZ statute as an incentive to recruit and retain providers to HEZs. DHMH is collaborating with the Maryland Higher Education Commission (MHEC) to offer loan repayment to eligible practitioners in HEZs through two existing State programs, the Maryland Loan Assistance Repayment Program (MLARP) for Physicians and the Janet L. Hoffman Loan Assistance Repayment Program. These State programs are being utilized to maximize current HEZ dollars. MLARP (state and federal funds) offers loan repayment to primary care physicians and physician assistants. The Janet L. Hoffman Loan Assistance Repayment Program offers loan repayment to nurses, nurse practitioners, physician assistants, and social workers.

To date, eight providers have been awarded loan repayment (Table 3), six from the West Baltimore HEZ and two from the Dorchester/Caroline HEZ. Six providers accepted loan repayment awards from the MLARP and two providers accepted loan repayment from the Janet L. Hoffman Loan Assistance Repayment Program (Table 4). DHMH has increased marketing efforts for loan repayment programs. The increased marketing has brought in more applications for loan repayment but a limited number of these applications are from practitioners in the HEZs.

Table 3. Providers Who Applied for Loan Repayment, Eligible, and Total Awarded

	Spring 2013	**Fall 2013**	**Spring 2014**	**Fall 2014**	**Spring 2015**	**Fall 2015**	
	Year 1	*Year 1*	*Year 2*	*Year 2*	*Year 3*	*Year 3*	**Total**
Total number of HEZ providers that applied for loan repayment	1	5	1	2	2	TBD in Jan 2016	**11**
Total Eligible for Loan Repayment	1	3	1	2	2	TBD in Jan 2016	**9**
Total # that Accepted Loan Repayment Award	1	2	1	2	2	TBD in Jan 2016	**8**

Table 4. Loan Repayment Awardees by Program

Program	**Spring 2013**	**Fall 2013**	**Spring 2014**	**Fall 2014**	**Spring 2015**	**Fall 2015**	**Total**
	Year 1	*Year 1*	*Year 2*	*Year 2*	*Year 3*	*Year 3*	
Maryland Loan Assistance Repayment Program (MLARP)- Primary Care Physicians and Physician Assistants	1	0	1	2	2	TBD in Jan 2016	6
Janet L. Hoffman – NP, RN, PA, LCSW	0	2	0	0	0	TBD in Jan 2016	2
Total	**1**	**2**	**1**	**2**	**2**	**n/a**	**8**

Tax Credits

Two types of tax credits are offered as incentives by the Act: hiring tax credits and income tax credits. The tax credits can be applied to practitioner income earned or new hires in the HEZs between January 1, 2013 and June 30, 2017. To date, all tax credit materials for both types of tax incentives have been developed and are available to the HEZs. DHMH conducted a webinar in June 2015 targeted to the HEZs to provide further education and awareness about tax credits.

The Health Care Practitioner Income tax credit launched in April 2014. Six applications were received for tax year 2013 (Table 5.), and five practitioners received a tax credit. These practitioners, all from the West Baltimore HEZ, received tax credits from the Health Care Practitioner Income Tax Credit, totaling $26,205. Applications for tax year 2014 (Table 6.) exceeded expectations and 20 applications have been received. Seventeen of these applications have been finalized and as of November 2015, $86,953 dollars have been awarded in tax credits for tax year 2014. Eight providers from the West Baltimore HEZ, eight providers from the Caroline/Dorchester HEZ, and one provider from St. Mary's have received tax credits to date. A total of $113,158 has been awarded for the Health Care Practitioner Income Tax Credit thus far for tax years 2013 and 2014. The HEZs requested a total of $264,145 in tax credits for Year 1, $228,290 for Year 2, and $94,818 for Year 3.

Table 5.

Health Care Practitioner Income Tax Credit- Number of Applications and Amount Granted Per Tax Year by Zone						
Tax Year 2013						
Zone	Number of Applicants	Number of Applicants that Received Preliminary Certification	Amount of Funding Requested	Number of Final Applications Received	Number of Applicants that Received Final Certification	Amount of Funding Granted
West Baltimore	6	6	$33,488.89	5	5	$26,204.75
Total	6	6	$33,488.89	5	5	$26,204.75

Table 6.

Health Care Practitioner Income Tax Credit- Number of Applications and Amount Granted Per Tax Year by Zone						
Tax Year 2014						
Zone	Number of Applicants	Number of Applicants that have Received Preliminary Certification (to Date)	Amount of Funding Requested	Numer of Final Applications Received (to Date)	Number of Applicants that Received Final Certification (to Date)	Amount of Funding Granted (to Date)
West Baltimore	11	11	$84,801.49	10	8	$62,148.00
Caroline/Dorchester	8	8	$20,823.85	8	8	$24,146.00
Greater Lexington Park	1	1	$659.00	1	1	$659.00
Total	20	20	$106,284.34	19	17	$86,953.00

The eligibility criteria for the Employer Hiring Tax Credit was amended by the Maryland General Assembly during the 2014 session to clarify that both for-profit and non-profit entities are eligible to apply for this refundable tax credit. Pursuant to this action by the Maryland General Assembly, DHMH has promulgated regulations which took effect in December 2014. The Employer Hiring Tax Credit was made available in February 2015. To date the Hiring Tax Credit has not been utilized by any of the HEZs.

A letter of support is required by the HEZ for all health care practitioners or entities that are applying for a tax credit. This letter of support was added to ensure that the practitioners or entities applying for tax credits are directly supporting the HEZ effort. Practitioners who provide services in an HEZ, work "in accordance with" the proposal approved by the Secretary (i.e. works with an HEZ to meet its goals and objectives), and have established or expanded health care services in an HEZ, may be eligible to receive HEZ letters of support.

In utilizing the available State programs as a mechanism for recruitment incentives, several barriers have been identified which may be affecting the utilization of loan repayment programs. The statutory guidelines for MLARP may be too restrictive to accommodate all providers who may be interested in loan repayment through the HEZs. For example, the number of hours the provider is required to work per week and their specific work location (i.e. inpatient vs. outpatient) can be prohibitive. Barriers to the State-funded Janet L. Hoffman Loan Assistance Repayment Program include a maximum salary cap, and a requirement that the provider must have graduated from a Maryland state institution to be eligible. Also, tracking utilization of the Janet L. Hoffman Program is difficult because it is housed at MHEC and DHMH does not have access to application data. Further, it is a very expansive loan repayment program providing loan repayment not only to health care providers, but to lawyers and teachers as well. The loan repayment incentives have been underutilized for these reasons and because some HEZs have had a significant number of older practitioner applicants, who have already paid off student loans.

DHMH is working closely with MHEC to identify possible solutions to these barriers that will make the programs more accessible to the HEZs. One strategy employed by two of the five HEZs was to request the use of recruitment incentives in the form of hiring and productivity bonuses for HEZ practitioners who could not benefit from, but otherwise qualified for, the HEZ hiring incentives.

B. Impact on Disparities, Health Outcomes, Admissions, Readmissions and Costs

The ultimate goals of the HEZ program are to improve health outcomes within the HEZs generally, to improve health outcomes in racial and ethnic minority populations within the HEZs in particular, and thereby contribute to reductions in racial/ethnic and geographic health disparities in Maryland. Outcome measures to assess improvement, specified in the legislation, are hospital admission rates, readmission rates, and hospital costs. Baseline trends in health outcomes at the HEZ level and across the State in the years leading up to the HEZ Initiative are used to understand the HEZ Initiative's impact on health care outcomes and costs.

Data measures include the Agency for Healthcare Research and Quality's Prevention Quality Indicators (PQIs), readmission rates and charges, all-cause ED visit rates, and ED visit rates for target conditions in each HEZ. Data were prepared using the Maryland Health Services Cost Review Commission's (HSCRC) inpatient discharge and outpatient ED visit records from Maryland's 48 hospitals. Data are not available on Maryland residents seeking care outside of Maryland. Therefore, data may be underreported, especially for the PGCHEZ, which is contiguous to Washington, DC, and allows Maryland residents easy access to Washington DC hospitals.

The PQIs are composites of measures used with inpatient discharge data to identify quality of care for ambulatory care sensitive conditions that are avoidable hospitalizations in patients ages 18 years and older. Good outpatient care and early intervention can potentially prevent hospitalization and complications, or more severe disease. The PQI overall composite includes all measures for acute and chronic conditions; the PQI acute composite includes measures for acute conditions; and the PQI chronic composite includes measures for chronic conditions (Appendix B, Table 1).

PQI overall, acute, and chronic composite rates were on a general downward trend for Maryland and all five HEZs from 2009 to 2014 (Appendix B, Figures 1, 2, and 3). All HEZs had overall composite rates higher than Maryland, with the exception of the GLPHEZ. The Caroline/Dorchester HEZ overall composite rate increased slightly from 2013 to 2014; however, this increase was still lower than their 2009 to 2011 rates and is most likely attributed to the increase in their acute composite rate. The Annapolis, West Baltimore, and Caroline/Dorchester HEZs had acute composite rates higher than Maryland, while the PGCHEZ and GLPHEZs had rates lower than Maryland. The GLPHEZ's chronic composite rate increased slightly from 2013 to 2014, although it is still significantly lower than their 2009 to 2012 rates, and it is the only HEZ with a chronic composite rate lower than Maryland.

Unplanned readmissions, often expensive and preventable, measure quality of outpatient care. The HSCRC definition of all-cause unplanned readmissions had not been finalized until this year. Therefore, readmissions data prepared for the previous Health Enterprise Zone Annual Legislative Report will not match data in this report since the previous definition included both planned and unplanned readmissions, a less sensitive measure of quality of outpatient care. All-cause unplanned readmission rates were on a downward trend for Maryland and the HEZs from 2012 and 2014 (data not available prior to 2012), with the exception of an increase in the Caroline/Dorchester HEZ in 2014 (Appendix B, Figure 4). However, this increase may be related

to acute, rather than chronic, conditions based on PQI composite rate trends. The PGCHEZ and GLPHEZ had readmission rates lower than Maryland, while the West Baltimore, Annapolis, and Caroline/Dorchester HEZs had readmission rates higher than Maryland. From 2012 to 2014, total readmission charges decreased for Annapolis, Prince George's and West Baltimore HEZs and increased for the Caroline/Dorchester HEZ (Appendix B, Figure 5).

In general, the all-cause ED visit rates increased slightly for Maryland and four HEZs from 2009 to 2014, with St. Mary's HEZ decreasing during that same time period (Appendix B, Figure 6). All cause ED visit rates among Black or African Americans increased slightly from 2009 to 2012, and then declined from 2012 to 2014 for Maryland and four HEZs. The Caroline/Dorchester HEZ's rate increased from 2009 to 2013, and then declined in 2014 (Appendix B, Figure 7). From 2009 to 2014, ED visit rates among Whites decreased for Maryland and the Prince George's and St. Mary's HEZs, while rates increased for the Annapolis, Caroline/Dorchester, and West Baltimore HEZs (Appendix B, Figure 8). ED visit rates among Black or African Americans were, in general, higher than rates among Whites for Maryland and all five HEZs.

The outcome measures outlined above have been mapped by HEZ, and are available at the following link: https://maps.dhmh.maryland.gov/hez/. This map also includes the zip code level indicators of economic disadvantage and poor health that were provided for HEZ applicants.

V. Program Guidance and Accomplishments

A. Technical Assistance (TA) Available to All HEZs

The State HEZ Team, supported by an HEZ Health Policy Advisor, focuses on assessing TA needs among the HEZs, and directing expertise and resources to meet those needs. TA provided during Year 3 focused largely on cultural competency; utilization of HEZ incentives; accessing and reporting health data; program performance and measurement; HEZ strategic planning; promotion and marketing of HEZ programs and services; development and implementation of CHW and care coordination programs; and strategies for sustaining HEZ efforts. In Year 1 TA was focused on recruitment and training to build capacity in the HEZs. In Year 2, the focus of TA was on filling and tracking newly added capacity, marketing, additional training, program development and strategic planning to ensure that the HEZs' efforts were cohesive and sufficiently focused on the legislatively mandated outcomes. TA is provided to the HEZs through phone calls, site visits, conferences and All-Zone meetings with the HEZs, State HEZ Team and other experts and stakeholders.

Data assessment site visits were conducted with each HEZ in late 2013. Data Team site visits were conducted in the spring of 2014, and winter and spring of 2015. "End of Year 1" and "End of Year 2" site visits were conducted in the summers of 2014 and 2015 in order to assess progress, review work plans, provide TA, and identify TA needs.

The State HEZ Team hosted its first All-Zone Meeting on December 3, 2014. These All-Zone Meetings will continue at least semi-annually through the remainder of the grant period, and will

serve as the primary method for providing TA to the HEZs. Presentations at the December 2014 All-Zone meeting included:

- Defining HEZ Success
- Aligning Goals, Objectives and Strategies with Other State Initiatives
- The PGCHEZ Care Coordination Program
- Accessing High Utilizer Data through CRISP
- Using HEZ Tax and Loan Repayment Incentives to Achieve the HEZs' Goals
- Developing Logic Models: Fine Tuning the HEZ Model to Local HEZs
- HEZ External Evaluation Update
- HEZ Reporting

All-Zone Meetings were also held on May 11th and September 11th of 2015 and focused on data, evaluation and reporting. Presentations at the May 11th meeting included:

- Overview of the HEZ External Evaluation
- HEZ Economic Impact Analysis, Findings and Discussion
- Accessing High Utilizer Data through CRISP
- Using Data Tools to Track Population Health in the HEZs
- Using Data Tools to Target Care Coordination Interventions
- HEZ Reporting Discussion

Presentations at the September 11th meeting included:

- Presentation of HEZ Local Evaluation Plans
- Approaches to Implementing and Measuring Care Coordination Programs
- Providing Tax Credit Letters of Support
- Breakout Sessions: (1) Approaches to Measuring Care Coordination, and (2) Addressing HEZ Reporting Challenges

The fourth All-Zone Meeting is scheduled for January 29, 2016 and will focus on sustaining the HEZs' efforts.

B. Cultural Competency Standards

In 2013, OMHHD used assessment criteria recommended by the Cultural and Linguistic Competency Workgroup of the Maryland Health Disparities Collaborative to develop a cultural and linguistic competency assessment tool for organizations requesting tax incentives as part of the HEZ program. The HEZ tax incentive program has reporting requirements for organizations which include an assessment of cultural competency and submission of the results to DHMH. The tool, OMHHD's Cultural Competency Assessment Survey, has been made available online to the HEZs.

In 2014, OMHHD held cultural competency training sessions at all of the HEZs which included meetings with HEZ leadership as well as full training sessions for on-site staff (see 2014 HEZ Annual Report).

Additional cultural competency reporting requirements were developed by OMHHD for health care providers seeking loan repayment or tax incentives through the HEZ program. Each provider is required to complete six continuing medical education credits (CMEs) in cultural competency with proof of completion to be sent to DHMH. Tax credit applicants must complete cultural competency requirements before receiving final tax credit certification. Maryland Loan Assistance Repayment Program recipients are required to complete six CME credits in cultural competency per each year of loan repayment service (minimum of two years). OMHHD has provided a list of applicable online cultural competency training courses for providers, but any course in cultural competency which provides an adequate number of CMEs is acceptable.

C. Monitoring Performance and Assessing Impact

The five HEZs have been monitored through site visits, quarterly reports that include process and outcome metrics, and semi-annual program narratives describing HEZ progress, challenges, and strategies for success. A formal review of each quarterly report submission was provided to each HEZ through a Report Follow-Up Memo. Subsequent phone conference or email exchanges are used to resolve any outstanding reporting questions or concerns.

An HEZ Data Team was established in July 2014 to support the HEZs in their data collection and reporting efforts. This group reviews and provides feedback and guidance to HEZs regarding data collection, reporting and storage, appropriate metrics, data reports, and data analysis. An "end of Year 1 audit" and site visits to all HEZs were conducted during spring/summer 2014, and produced significant revisions to the HEZs' reporting templates and metrics in an effort to capture more relevant, accurate and complete data. Similar site visits were conducted in the winter and spring of 2015. These efforts have resulted in changes in the data reported by several HEZs over the course of the Initiative, and are reflected in the data in this report. The site visits during the summer of 2015 were focused on review of Year 3 work plans, strategic planning and sustainability.

The Act requires DHMH and the Commission to submit an annual report to the Governor and Maryland General Assembly that includes: (1) Number and types of incentives utilized in each HEZ; (2) Evidence of the impact of tax and loan repayment incentives in attracting practitioners to the HEZs; (3) Evidence of the impact of incentives offered in HEZs in reducing health disparities and improving health outcomes; and (4) Evidence of progress in reducing health care costs and hospital admissions and readmissions in HEZs. These metrics are being collected through the HEZs' quarterly reports to the State and through DHMH's Virtual Data Unit.

Data collection and reporting efforts in Year 1 of the initiative focused primarily on tracking capacity expansion in the HEZs, and in Year 2 on tracking the HEZs' efforts to fill the new clinical and program capacity. The State HEZ Team also worked closely with the HEZs to define appropriate service volume targets and clear reporting methods for those service volumes. Year 3

reporting efforts were focused largely on capturing the quality and productivity of the HEZs' care coordination programs; tracking the utilization of the HEZ tax credit incentives; and collecting and reporting data by racial/ethnic group for the utilization of HEZ services. This data will help the HEZs assess and achieve equity in service delivery, where the racial/ethnic distribution of the population served is appropriate for the racial/ethnic distribution of the community where the services are provided. This data will be included in future HEZ reports.

Additionally, the State HEZ Team is working with the five HEZs to develop sustainability plans to support the activities once the four-year pilot program concludes. These strategies include exploring the means to identify reductions in hospital admission and readmission costs, and redeploying the savings that are achieved to support long-term program sustainability.

The independent evaluation of the HEZ Initiative, conducted by the Johns Hopkins Bloomberg School of Public Health's Center for Health Disparities Solutions, was initiated in Year 3. The evaluation team finalized and reported their evaluation study design and methods to the State in March 2015, and submitted their first report to the State in July 2015. The evaluation includes an assessment of the overall impact of the HEZ Initiative in terms of its three policy goals: (1) reducing health disparities among racial and ethnic groups and between geographic areas; (2) improving health care access and health outcomes in underserved communities; and (3) reducing health care costs and hospital admissions/readmissions by providing a variety of incentives. It also includes an assessment of the performance of the HEZs towards their individual programmatic goals and targeted health outcomes of each HEZ program, and resident and health provider experience and participation in the HEZs.

Finally, an economic impact assessment of the five HEZs will be conducted as part of the evaluation along the following criteria: (1) Cost savings achieved by the HEZs in terms of reduced hospital expenditures; (2) Number and type of incentives used by the HEZs and their impact on hiring and service expansion; (3) Number of direct and indirect jobs added by the HEZs; and (4) Additional economic activity generated by the HEZs.

The HEZ Evaluation Team developed all necessary evaluation instruments, informed consent forms, and participant communications for the first year of evaluation activities, which include key informant interviews with HEZ providers, staff and participants/clients, and an assessment of HEZ intervention strategies and activities. They submitted all necessary documents, along with the evaluation study protocol, to the Institutional Review Boards (IRBs) at the Johns Hopkins Bloomberg School of Public Health and at DHMH. They received notice in November 2015 that they had cleared both IRBs, and will conduct their initial site visits with all five HEZs between January and March 2016.

D. HEZ Presentations and Publications

- University of Maryland School of Medicine Department of Epidemiology and Public Health Grand Rounds. ***Maryland's Health Enterprise Zones: Linking Clinical Care and Community/Public Health for Population Health Improvement.*** (February 19, 2015)

- Maryland Community Health Resources Commission April 2015 Meeting. ***Defining HEZ Success: Expectations, Logic Model, and Deliverables.*** *(*April 2, 2015)

- Maryland Health Enterprise Zones Data and Evaluation All-Zone Meeting. ***Using Population Health Data Tools to Target Care Coordination Interventions.*** (May 11, 2015)

- Maryland State Launch of the Medi Community Resource Center: The Role of Community in Effecting Change in Population Health. ***Clinical-Community Coordination for Individually-Targeted Interventions.*** (December 2, 2015)

VI. Year Four Plans

The HEZs will submit updated work plans, budgets and evaluation plans in March 2016 for Year 4 of the Initiative (April 2016 – March 2017). The State HEZ Team, in partnership with the HEZs, will ensure that all HEZs' work plans, budgets and evaluation activities are focused on the legislatively mandated outcomes; that operations are modified based on lessons learned; and ongoing oversight focuses on achievement of the stated objectives for each HEZ and the Initiative overall.

The State HEZ Team will continue to work closely with the HEZs and the Evaluation Team to finalize program impact metrics within each HEZ and across HEZs where interventions are similar.

Another HEZ summit is being planned for 2016 for the purpose of bringing national experts to Maryland who can share their knowledge and experience implementing enterprise movements in communities with poverty. At this conference the Maryland HEZs will also share their experiences and increase collaboration throughout the State.

All-Zone meetings will continue between the HEZs and the State HEZ Team. The next meeting, planned for January 29, 2016, will focus on sustainability. The HEZ Team will continue to provide TA. Year 4 TA will focus on outcomes associated with the capacity added in these communities as a result of the HEZ Initiative, and development of a more formal HEZ learning collaborative. Resources and expertise will be provided as needed in the form of federal grants, data analyst experts, training and other support to strengthen each HEZ's capacity to revitalize public health with community partnerships at the local level. Webinars will serve as a primary tool for the HEZ learning collaborative. The topics below have been identified and will be considered for implementation, starting in February 2016.

- Care Coordination
    - Promoting Care Coordination Programs
    - How to engage patients and prevent loss to follow-up
    - Targeting Care Coordination Interventions: chronic versus intermittent high utilizers
    - Models for providing and tracking referral and follow-up
    - Measuring the Impact of Care Coordination Programs

    - Sustaining Care Coordination Programs
- Using HEZ data for decision-making
- Measuring and demonstrating return on investment (ROI)
- Building an organizational culture of quality improvement
- Disseminating evaluation results
- Publishing basics
- Innovative and best practice social marketing strategies for special populations
- Writing for your audience
- Promoting and implementing Chronic Disease Self-Management courses
- Updates on accessing and using CRISP data/CRISP HEZ data portal
- Strategies for sustaining the HEZs

Finally, the State HEZ Team will be working with the HEZs to develop and disseminate findings from the HEZ experience. The dissemination plan will include identification of target audiences, key messages linked to insights and results gained through the evaluation, and priority dissemination activities. Dissemination activities will likely include presentations and posters at public health conferences and meetings and the publication of reports and peer-reviewed journal articles, among others.

Appendix A
HEZ Data Tables

Table 1. HEZ Metrics for Annapolis	*October 2013-March 2014*	April - June 2014	July - September 2014	October - December 2014	January - March 2015	*April 2014-March 2015*	April - June 2015	July - September 2015	*April 2015-March 2016*	
Goal: Increase or Maintain Service Capacity	*Year 1 Total*	Year 2 Quarter 1 (cumulative total)	Year 2 Quarter 2 (cumulative total)	Year 2 Quarter 3 (cumulative total)	Year 2 Quarter 4 (cumulative total)	*Year 2 Total*	Year 3 Quarter 1 (cumulative total)	Year 3 Quarter 2 (cumulative total)	*Year 3 Total to Date*	
Number of Jobs Added[1]										
Number of Licensed Independent Practitioners[2] Added	*1 FTE*	1 FTE	1 FTE	1 FTE	1 FTE	*1 FTE*	1 FTE	1 FTE	*1 FTE*	
Number of Other Licensed or Certified Health Care Practioners[2] Added	*1 FTE*	1 FTE	1 FTE	1 FTE	1 FTE	*1 FTE*	1 FTE	1 FTE	*1 FTE*	
Number of Qualified Employees Added (CHWs and Interpreters)	*0 FTE*	0 FTE	0 FTE	0 FTE	0 FTE	*0 FTE*	0 FTE	0 FTE	*0 FTE*	
Number of Other Support Staff Added	*2 FTE*	2 FTE	2 FTE	2 FTE	2 FTE	*2 FTE*	2 FTE	2 FTE	*2 FTE*	
Total	*4 FTE*	4 FTE	4 FTE	4 FTE	4 FTE	*4 FTE*	4 FTE	4 FTE	*4 FTE*	
[1]Added = new or retained positions										
Goal: Reach Patients with Services	*Year 1 Total*	Year 2 Quarter 1 (not cumulative)	Year 2 Quarter 2 (not cumulative)	Year 2 Quarter 3 (not cumulative)	Year 2 Quarter 4 (not cumulative)	*Year 2 Total*	Year 3 Quarter 1 (not cumulative)	Year 3 Quarter 2 (not cumulative)	*Year 3 Total to Date*	Initiative Total to Date
Number of HEZ (unduplicated) patients seen by clinic/practice										
Morris Blum Clinic, Morris Blum residents	*81*	39	31	45	44	*159*	61	52	*113*	353
Morris Blum Clinic, reside outside Morris Blum	*470*	275	322	332	304	*1,233*	330	323	*653*	2,356
Number of 911 calls from Morris Blum residents	*105*	54	53	30	28	*165*	28	35	*63*	333
Number of ED visits among Morris Blum residents	*96*	38	51	37	33	*159*	27	35	*62*	317
Number of admissions among Morris Blum residents	*N/A*	N/A	N/A	N/A	N/A	*N/A*	14	13	*27*	27
Number of readmissions among Morris Blum residents	*N/A*	N/A	N/A	N/A	N/A	*N/A*	2	3	*5*	5
Number of patients with diabetes who received primary care	*N/A*	82	91	108	95	*376*	107	95	*202*	578
Total Number of Patient Visits throughout HEZ	*915*	535	492	623	489	*2,139*	700	686	*1,386*	4,440
Total Number of Unduplicated Patients throughout HEZ	*551*	314	353	377	348	*1,392*	391	375	*766*	2,709
Educational/wellness/self-management interventions										
Number of participants in Care Coordination Program	*N/A*	8	5	42	35	*90*	28	47	*75*	165
Number of diabetic screening participants	*229*	220	262	269	253	*1,004*	change in measurement			1,233
Number of blood pressure screening participants	*N/A*	17	108	61	55	*241*	176	193	*369*	610
Number of participants in diabetes self-management program	*17*	15	0	0	18	*33*	12	0	*12*	62
Number of participants in healthy lifestyle activities	*N/A*	81	140	60	20	*301*	20	17	*37*	338
Number of participants in community health events	*137*	30	254	228	128	*640*	52	18	*70*	847
Number of participants in smoking cessation workshops	*N/A*	7	50	3	18	*78*	27	2	*29*	107
Goal: Improve Health Outcomes										
	AAMC FY 2013	**AAMC FY 2014**	**AAMC FY 2015**							
AAMC Admission events, Morris Blum residents	82	84	48							
AAMC Readmission events, Morris Blum residents	16	20	4							
AAMC ED Visits, Morris Blum residents	179	190	148							
911 calls, Morris Blum residents	199	195	146							

[2] HEZ Practitioners: Includes Licensed Independent Practitioners (physician, dentist, nurse practitioner, physician assistant, nurse midwife) and Other Licensed or Certified Health Care Practitioner (RN, social worker, certified medical assistant, licensed practical nurse, dental hygienist, certified addictions counselor) who provide primary care, dental or behavioral health services in the HEZ. These practitioners are hired or retained to newly provide services in the HEZ due to the HEZ Initiative and may or may not receive HEZ funding.

Table 2. HEZ Metrics for Caroline/Dorchester	*October 2013-March 2014*	April - June 2014	July - September 2014	October - December 2014	January - March 2015	*April 2014- March 2015*	April - June 2015	July - September 2015	*April 2015-March 2016*	
Goal: Increase or Maintain Service Capacity	***Year 1 Total***	**Year 2 Quarter 1 (cumulative total)**	**Year 2 Quarter 2 (cumulative total)**	**Year 2 Quarter 3 (cumulative total)**	**Year 2 Quarter 4 (cumulative total)**	***Year 2 Total***	**Year 3 Quarter 1 (cumulative total)**	**Year 3 Quarter 2 (cumulative total)**	***Year 3 Total to Date***	
Number of Jobs Added[1]										
Number of Licensed Independent Practitioners[2] Added	*3.6 FTE*	3.6 FTE	3.6 FTE	3.6 FTE	4.3 FTE	*4.3 FTE*	4.3 FTE	4.3 FTE	*4.3 FTE*	
Number of Other Licensed or Certified Health Care Practioners[2] Added	*6.8 FTE*	7.2 FTE	6.93 FTE	5.93 FTE	6.43 FTE	*6.43 FTE*	5.63 FTE	6.8 FTE	*6.8 FTE*	
Number of Qualified Employees (CHWs and Interpreters) Added	*2.95 FTE*	2.45 FTE	3.45 FTE	3.45 FTE	3.45 FTE	*3.45 FTE*	3.45 FTE	3.45 FTE	*3.45 FTE*	
Number of Other Support Staff Added	*11.07 FTE*	9.93 FTE	9.13 FTE	9.13 FTE	8.79 FTE	*8.79 FTE*	10.93 FTE	11.43 FTE	*11.43 FTE*	
Total	*24.42 FTE*	23.18 FTE	23.11 FTE	22.11 FTE	22.97 FTE	*22.97 FTE*	24.31 FTE	25.98 FTE	*25.98 FTE*	
[1]Added = new or retained positions										
Goal: Reach Patients with Services	***Year 1 Total***	**(not cumulative)**	**(not cumulative)**	**Year 2 Quarter 3 (not cumulative)**	**Year 2 Quarter 4 (not cumulative)**	***Year 2 Total***	**Year 3 Quarter 1 (not cumulative)**	**Year 3 Quarter 2 (not cumulative)**	***Year 3 Total to Date***	***Initiative Total to Date***
Number of HEZ (unduplicated) patients seen by clinic/practice										
Chesapeake Women's Health primary care	*N/A*	N/A	N/A	N/A	N/A	*N/A*	N/A	N/A	*N/A*	N/A
Dorchester County School Based Wellness (somatic health)	*133*	91	53	101	93	*338*	87	48	*135*	606
Dorchester County School Based Wellness (mental health)	*N/A*	28	3	4	9	*44*	15	5	*20*	64
Caroline County School Based Wellness (mental health)	*3*	18	20	29	34	*101*	37	43	*80*	184
Mobile Crisis Team	*82*	47	58	46	46	*197*	65	60	*125*	404
Median response time to calls for Mobile Crisis Team	*13 min (average)*	13 min	11 min	22 min	19 min	*16.25 min (average)*	19 minutes	25 minutes	*22 min (average)*	
Total Number of Patient Visits throughout HEZ	*2,687*	1,895	1,606	2,002	2,396	*7899*	2,846	2,483	*5,329*	15,915
Total Number of Unduplicated Patients throughout HEZ	*591*	395	310	322	226	*1,253*	373	307	*680*	2,524
Number of individuals who receive education from CHOWs[3]	*45*	133	172	321	147	*773*	129	212	*341*	1,159
Number of individuals who were screened by CHOWs	*N/A*	72	115	81	86	*354*	72	91	*163*	517
Educational/wellness/self-management interventions										
Number of participants in Care Coordination Program	*18*	22	19	15	3	*59*	1	0[4]	*1*	78
Number of participants in Maryland Healthy Weighs	*23*	45	41	33	37	*156*	50	46	*96*	275
Number of participants in Dri-Dock Peer Recovery	*19*	46	18	16	8	*88*	8	8	*16*	123
Number of participants in Chesapeake Voyagers Peer Recovery	*N/A*	29	14	9	11	*63*	12	0	*12*	75

[2] HEZ Practitioners: Includes Licensed Independent Practitioners (physician, dentist, nurse practitioner, physician assistant, nurse midwife) and Other Licensed or Certified Health Care Practitioner (RN, social worker, certified medical assistant, licensed practical nurse, dental hygienist, certified addictions counselor) who provide primary care, dental or behavioral health services in the HEZ. These practitioners are hired or retained to newly provide services in the HEZ due to the HEZ Initiative and may or may not receive HEZ funding.

[3] CHOW = Community Health Outreach Worker

[4] The Caroline/Dorchester HEZ has a new Care Coordination provider as of September 2015 (Choptank Community Health System).

Table 3. HEZ Metrics for Greater Lexington Park	*October 2013- March 2014*	April - June 2014	July - September 2014	October - December 2014	January - March 2015	*April 2014- March 2015*	April - June 2015	July - September 2015	*April 2015- March 2016*	
Goal: Increase or Maintain Service Capacity	***Year 1 Total***	**Year 2 Quarter 1 (cumulative total)**	**Year 2 Quarter 2 (cumulative total)**	**Year 2 Quarter 3 (cumulative total)**	**Year 2 Quarter 4 (cumulative total)**	***Year 2 Total***	**Year 3 Quarter 1 (cumulative total)**	**Year 3 Quarter 2 (cumulative total)**	***Year 3 Total to Date***	
Number of Jobs Added[1]										
Number of Licensed Independent Practitioners[2] Added	*0.8 FTE*	0.3 FTE	0.3 FTE	2.3 FTE	2.3 FTE	*2.3 FTE*	2.5 FTE	2.5 FTE	*2.5 FTE*	
Number of Other Licensed or Certified Health Care Practioners[2] Added	*4 FTE*	4 FTE	4 FTE	6 FTE	3.2 FTE	*3.2 FTE*	3.2 FTE	3.2 FTE	*3.2 FTE*	
Number of Qualified Employees Added (CHWs and Interpreters)	*3 FTE*	3 FTE	3 FTE	3 FTE	3.0 FTE	*3.0 FTE*	3.0 FTE	3.0 FTE	*3.0 FTE*	
Number of Other Support Staff Added	*4.7 FTE*	4.7 FTE	4.7 FTE	7.5 FTE	7.5 FTE	*7.5 FTE*	7.5 FTE	7.5 FTE	*7.5 FTE*	
Total	*12.5 FTE*	12.0 FTE	12.0 FTE	18.8 FTE	16.0 FTE	*16.0 FTE*	16.2 FTE	16.2 FTE	*16.2 FTE*	
[1]Added = new or retained positions										
Goal: Reach Patients with Services	***Year 1 Total***	**Year 2 Quarter 1 (not cumulative)**	**Year 2 Quarter 2 (not cumulative)**	**Year 2 Quarter 3 (not cumulative)**	**Year 2 Quarter 4 (not cumulative)**	***Year 2 Total***	**Year 3 Quarter 1 (not cumulative)**	**Year 3 Quarter 2 (not cumulative)**	***Year 3 Total to Date***	***Initiative Total to Date***
Number of HEZ (unduplicated) patients seen by clinic/practice										
Get Connected to Health Mobile Clinic	*355*	187	318	53	17	*575*	126	250	*376*	1,306
Walden Sierra Behavioral Health	*606*	301	188	193	166	*848*	182	144	*326*	1,780
MedStar primary care practice	*N/A*			79	180	*259*	17	61	*78*	337
Dental Van	*N/A*			6	31	*37*	21	0	*21*	58
Total Number of Patient Visits throughout HEZ	*N/A*	1,764	3,183	3,628	2,066	*10,641*	2,305	2,237	*4542*	15,183
Total Number of Unduplicated Patients throughout HEZ	*N/A*	488	506	331	394	*1,719*	346	184	*530*	2,249
Number of CHW encounters	*570*	487	939	1,091	1,251	*3,768*	712	706	*1418*	5,756
Educational/wellness/self-management interventions										
Number of patients working with Care Coordinators	*119*	87	116	140	98	*441*	150	246	*396*	956
Number of rides on HEZ Mobile Medical Route	*387*	788	2,171	1,313	1,198	*5,470*	1,304	1,836	*3140*	8,997

[2] HEZ Practitioners: Includes Licensed Independent Practitioners (physician, dentist, nurse practitioner, physician assistant, nurse midwife) and Other Licensed or Certified Health Care Practitioner (RN, social worker, certified medical assistant, licensed practical nurse, dental hygienist, certified addictions counselor) who provide primary care, dental or behavioral health services in the HEZ. These practitioners are hired or retained to newly provide services in the HEZ due to the HEZ Initiative and may or may not receive HEZ funding.

Table 4. HEZ Metrics for Prince George's County	*October 2013-March 2014*	April - June 2014	July - September 2014	October - December 2014	January - March 2015	*April 2014-March 2015*	April - June 2015	July - September 2015	*April 2015-March 2016*	
Goal: Increase or Maintain Service Capacity	***Year 1 Total***	**Year 2 Quarter 1 (cumulative total)**	**Year 2 Quarter 2 (cumulative total)**	**Year 2 Quarter 3 (cumulative total)**	**Year 2 Quarter 4 (cumulative total)**	***Year 2 Total***	**Year 3 Quarter 1 (cumulative total)**	**Year 3 Quarter 2 (cumulative total)**	***Year 3 Total to Date***	
Number of Jobs Added[1]										
Number of Licensed Independent Practitioners[2] Added	*2.6 FTE*	2.6 FTE	2.6 FTE	4.5 FTE	3.5 FTE	*3.5 FTE*	3.5 FTE	3.2 FTE	*3.2 FTE*	
Number of Other Licensed or Certified Health Care Practioners[2] Added	*1.5 FTE*	1.5 FTE	2 FTE	4.5 FTE	6.5 FTE	*6.5 FTE*	6.5 FTE	6.5 FTE	*6.5 FTE*	
Number of Qualified Employees Added (CHWs and Interpreters)	*3 FTE*	5 FTE	5 FTE	5 FTE	5.0 FTE	*5.0 FTE*	5.0 FTE	4.0 FTE	*4.0 FTE*	
Number of Other Support Staff Added	*1.5 FTE*	1.5 FTE	2.5 FTE	2.5 FTE	2.5 FTE	*2.5 FTE*	2.5 FTE	2.5 FTE	*2.5 FTE*	
Total	*8.6 FTE*	10.6 FTE	12.1 FTE	16.5 FTE	17.5 FTE	*17.5 FTE*	17.5 FTE	16.2 FTE	*16.2 FTE*	
[1]**Added = new or retained positions**										
Goal: Reach Patients with Services	***Year 1 Total***	**Year 2 Quarter 1 (not cumulative)**	**Year 2 Quarter 2 (not cumulative)**	**Year 2 Quarter 3 (not cumulative)**	**Year 2 Quarter 4 (not cumulative)**	***Year 2 Total***	**Year 3 Quarter 1 (cumulative)**	**Year 3 Quarter 2 (cumulative)**	***Year 3 Total to Date***	***Initiative Total to Date***
Number of HEZ (unduplicated) patients seen by clinic/practice										
Global Vision	*11*	49	72	74	76	*271*	82	75	*157*	439
Greater Baden Medical Services	*910*	3,378	3,392	3,169	3,265	*13,204*	3,518	2,863	*6,381*	20,495
Gerald Family Care	*N/A*			279	385	*664*	541	570	*1,111*	1,775
Total Number of Patient Visits throughout HEZ	*11,526*	4,867	5,159	4,976	4,812	*19,814*	5,499	4,486	*9,985*	41,325
Total Number of Unduplicated Patients throughout HEZ	*925*	3,411	3,464	3,522	3,726	*14,123*	4,141	3,508	*7,649*	22,697
Educational/wellness/self-management interventions										
Number of clients in CHW Care Coordination Program	*N/A*	53	67	182	214	*516*	103	104	*207*	723
Number of patient encounters with Care Coordinators	*N/A*	1,908	2,412	559	1,088	*5,967*	1,362	1,099	*2,461*	8,428
Number of Wellness Plans created for Global Vision patients	*N/A*	2	6	25	120	*153*	176	75	*251*	404
Number of Wellness Plans created for Greater Baden patients	*N/A*	9	17	153	35	*214*	121	118	*239*	453
Number of Wellness Plans created for Gerald Family Care patients	*N/A*	N/A	N/A	48	0	*48*	0	30	*30*	78
Total number of completed client resource connections	N/A	N/A	N/A	714	1,336	*2,050*	1,522	1,518	*3,040*	5,090

[2] HEZ Practitioners: Includes Licensed Independent Practitioners (physician, dentist, nurse practitioner, physician assistant, nurse midwife) and Other Licensed or Certified Health Care Practitioner (RN, social worker, certified medical assistant, licensed practical nurse, dental hygienist, certified addictions counselor) who provide primary care, dental or behavioral health services in the HEZ. These practitioners are hired or retained to newly provide services in the HEZ due to the HEZ Initiative and may or may not receive HEZ funding.

Table 5. HEZ Metrics for West Baltimore	*October 2013-March 2014*	April - June 2014	July - September 2014	October - December 2014	January - March 2015	*April 2014-March 2015*	April - June 2015	July - September 2015	*April 2015-March 2016*	
Goal: Increase or Maintain Service Capacity	***Year 1 Total***	**Year 2 Quarter 1 (cumulative total)**	**Year 2 Quarter 2 (cumulative total)**	**Year 2 Quarter 3 (cumulative total)**	**Year 2 Quarter 4 (cumulative total)**	***Year 2 Total***	**Year 3 Quarter 1 (cumulative total)**	**Year 3 Quarter 2 (cumulative total)**	***Year 3 Total to Date***	
Number of Jobs Added[1]										
Number of Licensed Independent Practitioners[2] Added	*9 FTE*	9 FTE	13 FTE	13 FTE	13 FTE	*13 FTE*	14 FTE	0 FTE	*0 FTE*	
Number of Other Licensed or Certified Health Care Practioners[2] Added	*4 FTE*	3 FTE	3 FTE	3 FTE	3 FTE	*3 FTE*	4 FTE	0 FTE	*0 FTE*	
Number of Qualified Employees (CHWs and Interpreters) Added	*11.5 FTE*	11.5 FTE	11.5 FTE	11.5 FTE	11.5 FTE	*11.5 FTE*	8 FTE	5 FTE	*5 FTE*	
Number of Other Support Staff Added	*5.5 FTE*	5.5 FTE	5.5 FTE	5.5 FTE	5.5 FTE	*5.5 FTE*	6.3 FTE	6.3 FTE	*6.3 FTE*	
Total	*30.0 FTE*	29.0 FTE	33.0 FTE	33.0 FTE	33.0 FTE	*33.0 FTE*	32.3 FTE	11.3 FTE [3]	*11.3 FTE*	
[1]**Added = new or retained position**										
Goal: Reach Patients with Services	***Year 1 Total***	**Year 2 Quarter 1 (not cumulative)**	**Year 2 Quarter 2 (not cumulative)**	**Year 2 Quarter 3 (not cumulative)**	**Year 2 Quarter 4 (not cumulative)**	***Year 2 Total***	**Year 3 Quarter 1 (not cumulative)**	**Year 3 Quarter 2 (not cumulative)**	***Year 3 Total to Date***	***Initiative Total to Date***
Number of HEZ (unduplicated) patients seen by clinic/practice										
UMMC University Care Edmondson Village	*4,784*	1,254	1,343	1,241	1,397	*5,235*	1,158	1,233	*2,391*	12,410
Bon Secours Family Health and Wellness Center	*304*	329	377	335	413	*1,454*	429	394	*823*	2,581
Baltimore Medical System at St. Agnes	*1,681*	916	833	826	777	*3,352*	1,003	5,513	*6,516*	11,549
St. Agnes Outpatient Clinic	*n/a*	n/a	n/a	3,219	3,260	*6,479*	3,402	1,807	*5,209*	11,688
Total Health Care	*15,671*	5,106	4,783	4,657	4,892	*19,438*	4,471	4,390	*8,861*	43,970
Park West	*145*	116	115	133	121	*485*	268	246	*514*	1,144
Total Number of Patient Visits throughout HEZ	*33,789*	12,975	12,102	16,450	11,574	*53,101*	15,841	25,517	*41,358*	128,248
Total Number of Unduplicated Patients throughout HEZ	*22,716*	7,721	7,451	10,411	7,504	*33,087*	10,040	13,916	*23,956*	79,759
Number of individuals who connect with CHW	*2,397*	539	478	1,198	2,344	*4,559*	1,118	800	*1,918*	8,874
Number of newly identified high utilizers	*N/A*	N/A	N/A	N/A	N/A	*N/A*	N/A	319	*319*	319
Number of high utilizers successfully linked to a CHW	*N/A*	N/A	N/A	N/A	N/A	*N/A*	N/A	249	*249*	249
Number of high utilizers successfully linked to a CHW for prolonged support	*N/A*	N/A	N/A	N/A	N/A	*N/A*	N/A	111	*111*	111
Educational/wellness/self-management interventions										
Number of participants in Stanford Disease Management Program	*84*	0	0	0	0	*0*	124	22	*146*	230
Number of participants in WB CARE Fitness Program	*407*	189	281	221	289	*980*	265	277	*542*	1,929
Number of residents enrolled in Passport to Health program	*468*	525	785	N/A	761	*2,071*	997	1,200	*2,197*	4,736

[2] HEZ Practitioners: Includes Licensed Independent Practitioners (physician, dentist, nurse practitioner, physician assistant, nurse midwife) and Other Licensed or Certified Health Care Practitioner (RN, social worker, certified medical assistant, licensed practical nurse, dental hygienist, certified addictions counselor) who provide primary care, dental or behavioral health services in the HEZ. These practitioners are hired or retained to newly provide services in the HEZ due to the HEZ Initiative and may or may not receive HEZ funding.

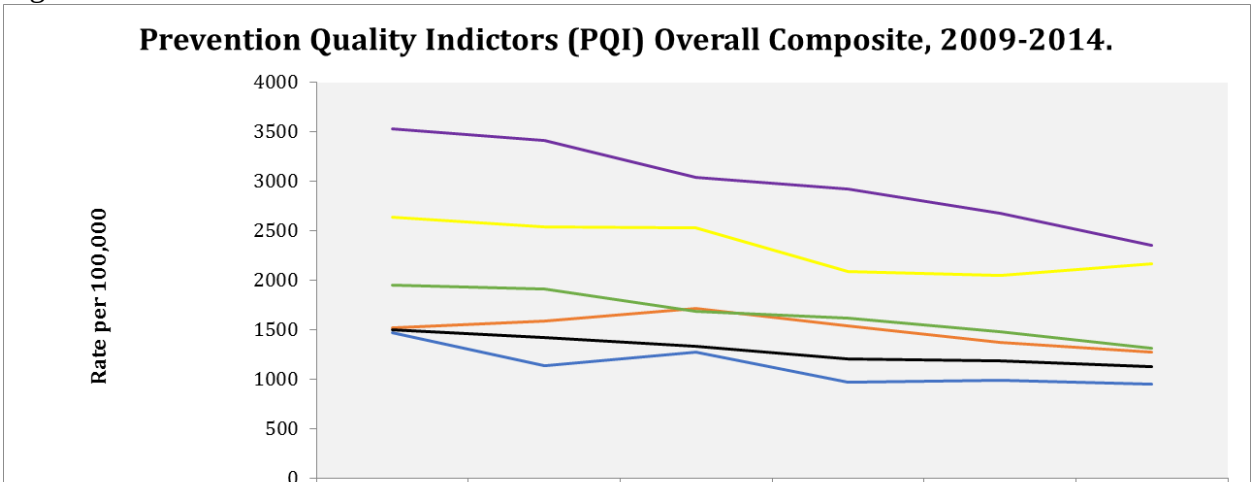
[3] West Baltimore HEZ revised their criteria for reporting "HEZ Jobs Added" as of Y3Q2

Appendix B
Hospital Utilization Data, Maryland and Zone

Table 1. AHRQ PQI Composite Measures

Overall Composite (PQI #90)	
Acute Composite (PQI #91)	**Chronic Composite (PQI #92)**
PQI #10 Dehydration Admission Rate PQI #11 Bacterial Pneumonia Admission Rate PQI #12 Urinary Tract Infection Admission Rate	PQI #01 Diabetes Short-Term Complications Admission Rate PQI #03 Diabetes Long-Term Complications Admission Rate PQI #05 Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate PQI #07 Hypertension Admission Rate PQI #08 Congestive Heart Failure Admission Rate PQI #13 Angina without Procedure Admission Rate PQI #14 Uncontrolled Diabetes Admission Rate PQI #15 Asthma in Younger Adults Admission Rate PQI #16 Rate of Lower-Extremity Amputation Among Patients with Diabetes

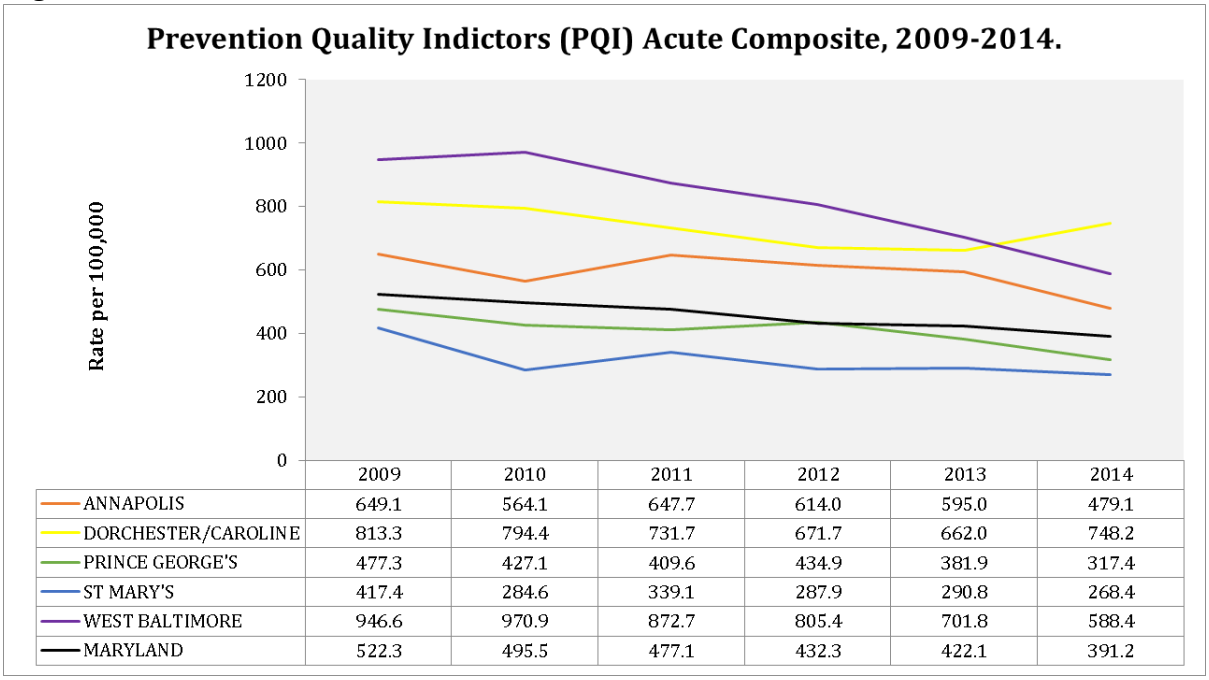
Figure 1.



	2009	2010	2011	2012	2013	2014
ANNAPOLIS	1514.6	1581.6	1715.5	1537.8	1369.0	1274.2
DORCHESTER/CAROLINE	2636.8	2542.5	2529.4	2088.0	2048.1	2165.4
PRINCE GEORGE'S	1946.5	1914.0	1681.8	1615.5	1473.7	1316.1
ST MARY'S	1466.0	1135.3	1267.7	969.6	985.8	945.1
WEST BALTIMORE	3531.4	3417.8	3041.7	2920.4	2672.6	2351.5
MARYLAND	1493.7	1415.7	1331.7	1208.0	1188.2	1127.2

Source: HSCRC data prepared by the DHMH Virtual Data Unit.

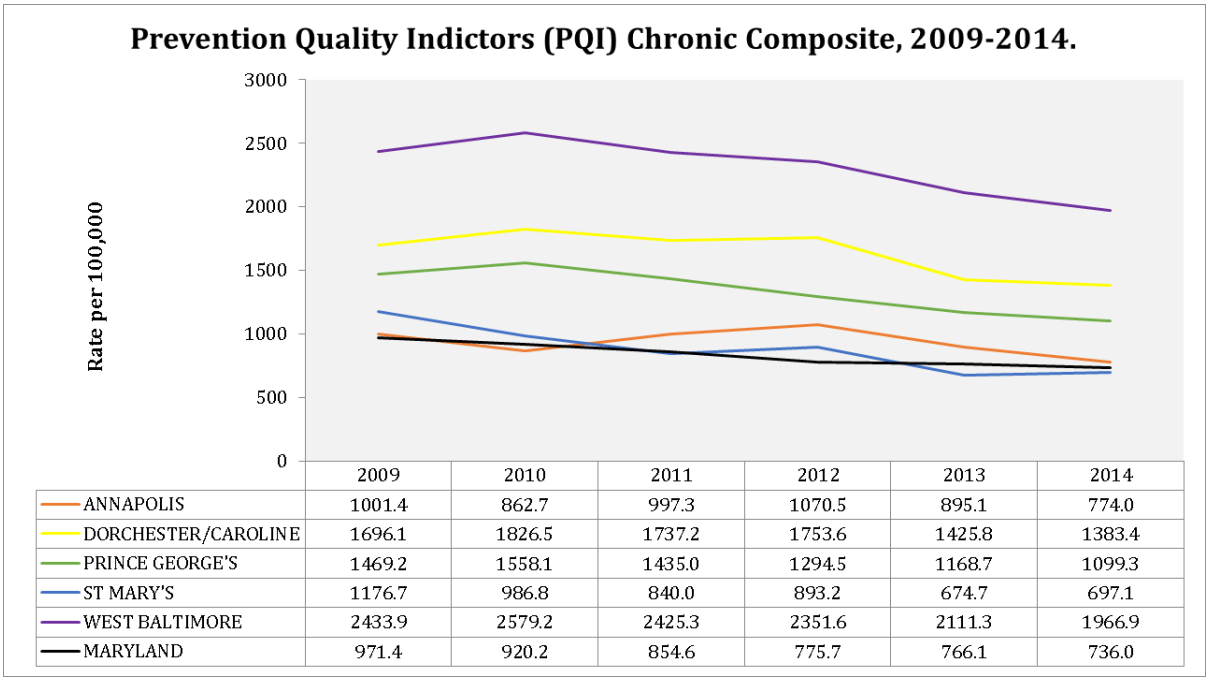
Figure 2.



	2009	2010	2011	2012	2013	2014
ANNAPOLIS	649.1	564.1	647.7	614.0	595.0	479.1
DORCHESTER/CAROLINE	813.3	794.4	731.7	671.7	662.0	748.2
PRINCE GEORGE'S	477.3	427.1	409.6	434.9	381.9	317.4
ST MARY'S	417.4	284.6	339.1	287.9	290.8	268.4
WEST BALTIMORE	946.6	970.9	872.7	805.4	701.8	588.4
MARYLAND	522.3	495.5	477.1	432.3	422.1	391.2

Source: HSCRC data prepared by the DHMH Virtual Data Unit.

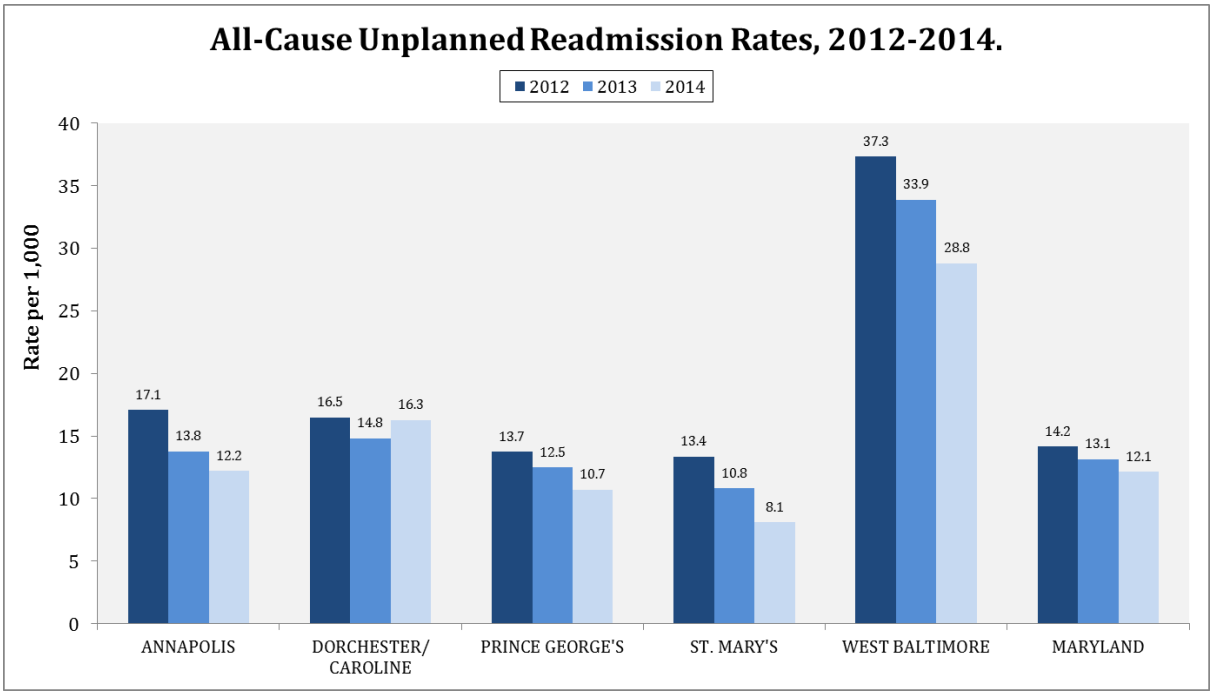
Figure 3.



	2009	2010	2011	2012	2013	2014
ANNAPOLIS	1001.4	862.7	997.3	1070.5	895.1	774.0
DORCHESTER/CAROLINE	1696.1	1826.5	1737.2	1753.6	1425.8	1383.4
PRINCE GEORGE'S	1469.2	1558.1	1435.0	1294.5	1168.7	1099.3
ST MARY'S	1176.7	986.8	840.0	893.2	674.7	697.1
WEST BALTIMORE	2433.9	2579.2	2425.3	2351.6	2111.3	1966.9
MARYLAND	971.4	920.2	854.6	775.7	766.1	736.0

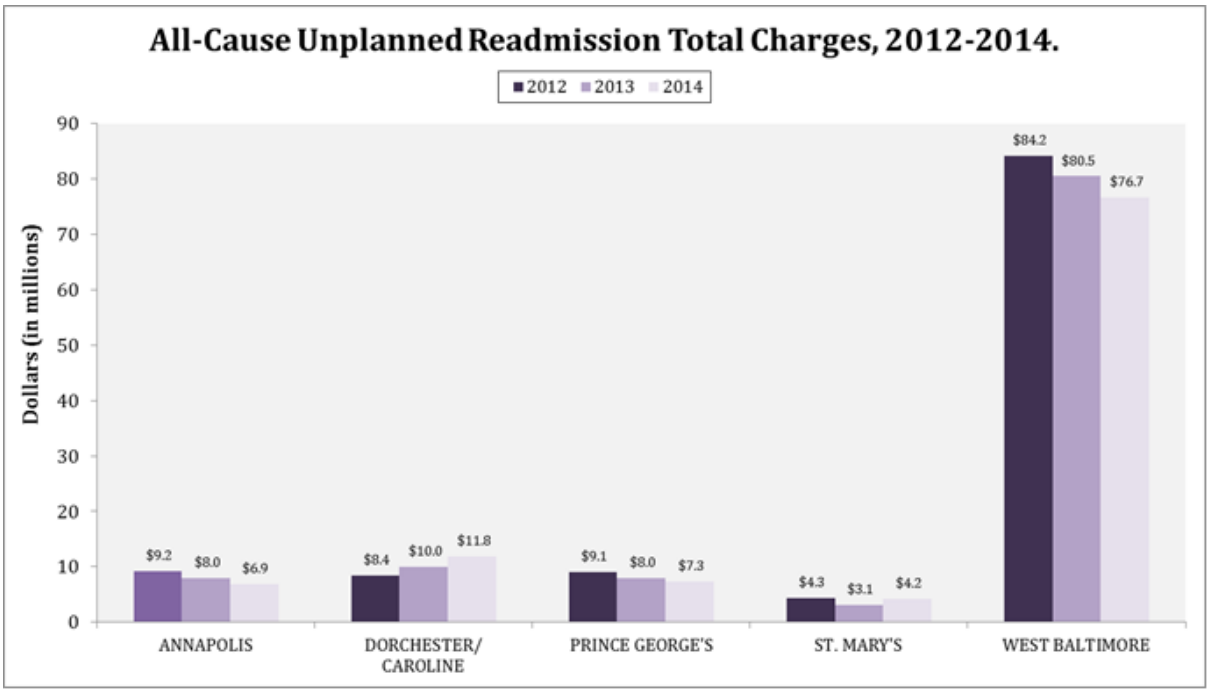
Source: HSCRC data prepared by the DHMH Virtual Data Unit.

Figure 4.



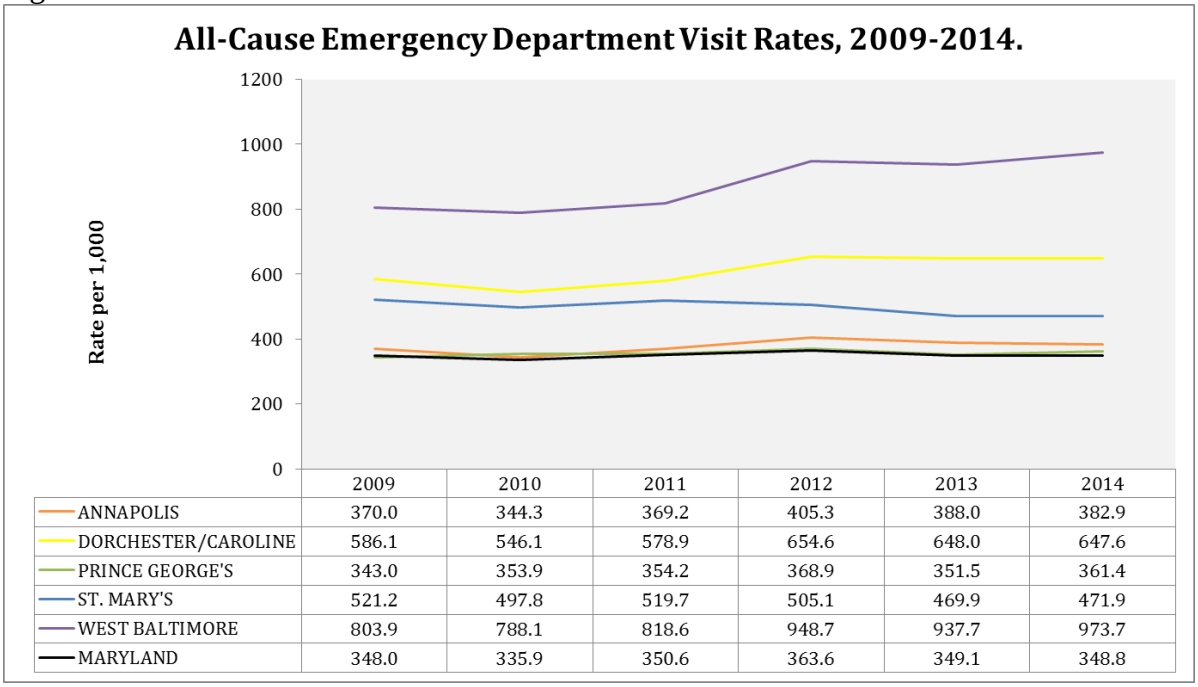
Source: HSCRC data prepared by the Chesapeake Regional Information System for our Patients and the DHMH Virtual Data Unit.

Figure 5.



Source: HSCRC data prepared by the Chesapeake Regional Information System for our Patients and the DHMH Virtual Data Unit.

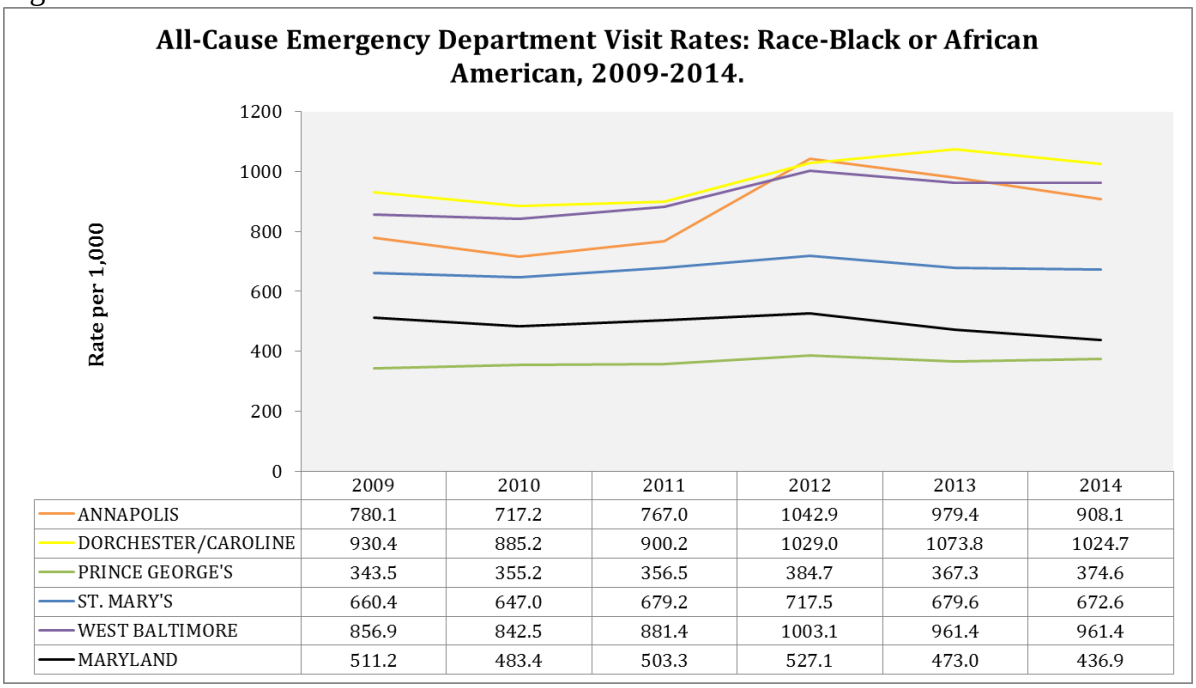
Figure 6.



	2009	2010	2011	2012	2013	2014
ANNAPOLIS	370.0	344.3	369.2	405.3	388.0	382.9
DORCHESTER/CAROLINE	586.1	546.1	578.9	654.6	648.0	647.6
PRINCE GEORGE'S	343.0	353.9	354.2	368.9	351.5	361.4
ST. MARY'S	521.2	497.8	519.7	505.1	469.9	471.9
WEST BALTIMORE	803.9	788.1	818.6	948.7	937.7	973.7
MARYLAND	348.0	335.9	350.6	363.6	349.1	348.8

Source: HSCRC data prepared by the DHMH Virtual Data Unit.

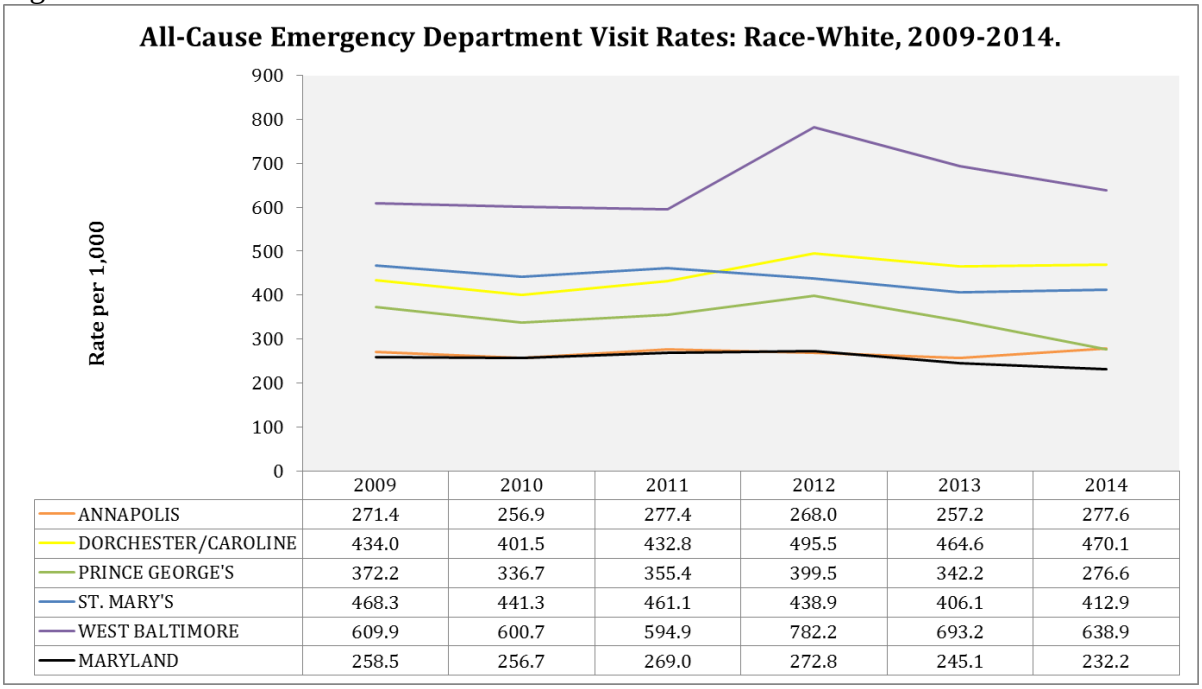
Figure 7.



	2009	2010	2011	2012	2013	2014
ANNAPOLIS	780.1	717.2	767.0	1042.9	979.4	908.1
DORCHESTER/CAROLINE	930.4	885.2	900.2	1029.0	1073.8	1024.7
PRINCE GEORGE'S	343.5	355.2	356.5	384.7	367.3	374.6
ST. MARY'S	660.4	647.0	679.2	717.5	679.6	672.6
WEST BALTIMORE	856.9	842.5	881.4	1003.1	961.4	961.4
MARYLAND	511.2	483.4	503.3	527.1	473.0	436.9

Source: HSCRC data prepared by the DHMH Virtual Data Unit.
Note: HSCRC's race variable changed July 2013; therefore, 2013+ race data should be compared to previous years with caution.

Figure 8.



	2009	2010	2011	2012	2013	2014
ANNAPOLIS	271.4	256.9	277.4	268.0	257.2	277.6
DORCHESTER/CAROLINE	434.0	401.5	432.8	495.5	464.6	470.1
PRINCE GEORGE'S	372.2	336.7	355.4	399.5	342.2	276.6
ST. MARY'S	468.3	441.3	461.1	438.9	406.1	412.9
WEST BALTIMORE	609.9	600.7	594.9	782.2	693.2	638.9
MARYLAND	258.5	256.7	269.0	272.8	245.1	232.2

Source: HSCRC data prepared by the DHMH Virtual Data Unit.
Note: HSCRC's race variable changed July 2013; therefore, 2013+ race data should be compared to previous years with caution.