Achieveing Health Equity: Health Impact of Maryland's Health Enterprise Zones

White Paper

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Executive Summary

Historically, racial/ethnic minorities and residents living in underserved areas have experienced disparate access to health care in Maryland. The same communities also have higher rates of chronic diseases such as diabetes, hypertension and heart disease. This can lead to preventable, costly hospitalizations and poor health outcomes.

During implementation of the Affordable Care Act and Medicaid expansion, the Maryland General Assembly passed legislation authorizing the Maryland Health Improvement and Disparities Reduction Act. This policy created the framework for an innovative pilot program referred to as the Health Enterprise Zones (HEZ) Initiative. The goals of the initiative were to reduce health disparities, improve health care access and health outcomes, and reduce health care costs and hospital admissions/readmissions in some of the state's most underserved communities. Health Enterprise Zones, coordinated by local public-private coalitions, were eligible for financial incentives such as tax credits and loan repayment programs. These incentives were used to attract much needed health care providers to the HEZs and to address unmet healthcare needs of the community.

In a previous analysis, the HEZ Initiative was associated with a significant reduction of inpatient hospital stays and a net savings of over $93 million for Maryland's health care system. The purpose of this white paper is to examine the associated health impacts of the initiative.

The State funded five HEZs: Annapolis/Morris Blum; Capitol Heights in Prince George's County; Caroline and Dorchester Counties; Greater Lexington Park in St. Mary's County; and West Baltimore in Baltimore City. All of the HEZs sought to reduce diabetes and cardiovascular disease related illnesses and associated risk factors. In addition, two HEZs addressed asthma (Capitol Heights and Greater Lexington Park), two HEZs addressed behavioral/mental health (Caroline-Dorchester and Greater Lexington Park) and two HEZs addressed obesity (Caroline-Dorchester and West Baltimore).

To achieve their program objectives, each HEZ had latitude in the strategy they developed to address the unique challenges to health in their community. However, all of the HEZs used financial incentives to expand the availability of primary care in their communities; whether through recruiting additional health providers or opening new health centers/clinics. In addition, each HEZ employed community health workers to address clinical and social risk factors of vulnerable patients in their community. Depending on their specific community needs, the HEZs also operated mobile care units (medical, mental, and dental), implemented nutrition and healthy lifestyle programs, provided transportation assistance and enhanced school-based health services. In total, the five HEZs provided over 300,000 visits to more than 170,000 individual patients during this pilot program.

Overall, the HEZs were able to positively impact health outcomes in their respective areas by employing a variety of creative community-based solutions. The HEZ Initiative can serve as a model for future programs aiming to address racial/ethnic health disparities, improve access to health care, and reduce health care costs in low-income and medically underserved communities.

Introduction

In general, racial/ethnic minorities are more likely to be diagnosed with and die from chronic diseases. For instance, compared with non-Hispanic whites, Black/African Americans are 40% more likely to have hypertension and 20% more likely to die from heart disease and American Indians are 50% more likely to be diagnosed with heart disease and 2.5 times more likely to die from diabetes (OMH, 2019). Disparities also exist in access to health care and treatment. For example, Hispanic/Latino Americans are twice as likely to visit the emergency department for asthma and receive mental health treatment half as often as non-Hispanic whites (OMH, 2019).

In Maryland, health disparities have also disproportionally impacted racial/ethnic minorities and plagued underserved communities for many years. Although progress has been made to reduce some disparities, higher mortality rates still exist for racial/ethnic minorities and residents of rural regions in the state (Chen, 2012). In particular, Blacks in Maryland have higher death rates for heart disease (1.2 times), stroke (1.35 times), diabetes (2.1 times) and asthma (4.5 times) as compared to Whites (Mann, 2019). Rates of emergency department visits related to these conditions are also significantly higher among Blacks than whites. (Mann, 2019). In recent months, the global COVID-19 pandemic has shed new light on social determinants of health that impact health disparities. In Maryland, Blacks and Hispanics overwhelmingly represent the higher percentage of cumulative COVID cases and COVID-related hospitalizations as compared to the total population; with Blacks and Whites representing the highest percentage of deaths (Mann, 2020).

In 2011, Lieutenant Governor Anthony G. Brown, Chair of the Maryland Health Quality and Cost Council, formed a Health Disparities Workgroup in response to the continuous health inequities in Maryland and a report from the Maryland Health Care Reform Coordinating Council. The workgroup was charged with investigating strategies to reduce and eliminate health disparities. Led by Dean E. Albert Reece of the University of Maryland School of Medicine, the workgroup was composed of a diverse group of health experts and community health leaders. The workgroup recommended three innovative strategies to improve health and health care disparities in Maryland, in particular, the formation of Health Enterprise Zones (HEZs) (Maryland Health Quality and Cost Council, 2012). These recommendations, based on principles of economic development and public health practice, formed the foundation of the Maryland Health Improvement and Disparities Reduction Act of 2012 (Senate Bill 234) which was signed into law by Governor Martin O'Malley on April 10, 2012. (Maryland Health Improvement and Disparities Reduction Act of 2012).

The legislation enabled the establishment of HEZs as a mechanism to target resources in specific areas of the State. The purpose of the HEZs were to:

- Reduce health disparities among racial/ethnic groups and geographic areas;
- Improve health care access and health outcomes in underserved communities; and
- Reduce health care costs and hospital admissions/readmissions.

HEZs were defined as contiguous geographic areas where the population experienced poor health outcomes that contribute to racial/ethnic and geographic health disparities. HEZs were

eligible for technical support and special financial incentives that were used to recruit primary care practitioners and support community-based interventions. Incentives included income and hiring tax credits, loan repayment assistance, priority participation in the Maryland Patient Centered Medical Home Program and grant funding provided by the Maryland Community Health Resources Commission (CHRC). HEZs were required to be small enough for incentives to have a significant and measurable impact. The Health Improvement and Disparities Reduction Act provided $4 million per year over a four-year period (2013-2016) to support the Maryland Health Enterprise Zones Initiative (DHMH, 2014).

In a previous analysis, the Health Enterprise Zones Initiative was associated with a reduction of 18,562 inpatient hospital stays, an increase of 40,488 emergency department visits and a net savings of $93.4 million for Maryland's health care system (Gaskin et al, 2018). The increase in emergency department visits was probably due to two phenomena. One, patients who were not seeking care because of the healthcare aware the HEZ raised in the community, these patients began seeking care. Two, patients who normally would have been admitted to the hospitals through the emergency room were now being sent home because there were follow-up resources available in the community. There was anecdotal evidence from residents and healthcare providers to support the latter explanation. The purpose of this white paper is to examine the associated health impacts of the five Health Enterprise Zones piloted in Maryland.

Overview of Maryland's Five Health Enterprise Zones

In collaboration, the Maryland Department of Health and Mental Hygiene (DHMH) and the Community Health Resources Commission administered the HEZ initiative in three stages: (1) Public Comment & Community Forums, (2) HEZ Selection Process and (3) Implementation & Evaluation. Nonprofit community-based organizations and local government agencies were eligible to apply for HEZ designation based on the following criteria (DHMH, 2012):

1. An HEZ must be a community, or a contiguous cluster of communities, defined by zip code boundaries (one or multiple zip codes).
2. An HEZ must have a resident population of at least 5,000 people.
3. An HEZ must demonstrate economic disadvantage by: Medicaid enrollment rate; or WIC participation rate above the median value for Maryland.
4. An HEZ must demonstrate poor health outcomes by: a lower life expectancy or higher percentage of low birth weight infants based on the median value for Maryland.

The HEZ call for proposals resulted in 19 applications from various areas across Maryland. In January 2013, the DHMH designated five Health Enterprise Zones based on the recommendations of an independent HEZ Review Committee and the CHRC. The five HEZs, depicted below, represent rural, suburban and urban communities from across the state.

Figure 1: Map of Maryland's Health Enterprise Zones, January 2013
(Source: Dwyer, 2017)

During the four-year implementation and evaluation period (2013-2016), each HEZ focused on improving the health care needs of their respective community. Although there was variation in approaches, each HEZ targeted specific clinical conditions/diseases with the common goal of reducing health disparities, increasing health care access and improving health outcomes. The health impacts of each HEZ are described below and Table 1 provides a summary of HEZ characteristics. This table provides the county where the HEZ was located, the zip codes that comprised the HEZ, the HEZ's population, the lead organization coordinating the HEZ, the HEZ budget, and the chronic health conditions the HEZ addressed.

Annapolis Community Health Partnership (ACHP) HEZ

The ACHP utilized HEZ funds to establish a new primary care health center in the Morris H. Blum senior citizen public housing facility. The primary goal of the HEZ was to screen and treat patients for cardiovascular risk factors, including diabetes, hypertension, obesity and smoking. In addition, the ACHP HEZ aimed to reduce preventable emergency room visits and hospital admissions among this community of high utilizers. Services were available to the Morris Blum residents and low-income adults in the surrounding community at reduced or no cost.

The Morris Blum Clinic opened in October 2013 and began providing services with one physician, one registered nurse/case manager and two medical office assistants (Hussein, 2014). After three years in operation, the clinic provided 7,089 patient visits to 4,191 individuals who resided in the Morris Blum facility and surrounding community, including 1,037 patients with diabetes (MDHMH, 2017). The clinic also received Level 3 recognition by the National Committee for Quality Assurance as a Patient Centered Medical Home. As compared to the total HEZ population, the Morris Blum Clinic served higher proportions of Black/African American and Hispanic/Latino patients.

The ACHP employed a number of strategies to improve patient outcomes in the HEZ including: care coordination services, utilization of an integrated electronic health record, patient registries, onsite lab services, chronic disease management programs and trainings in bias awareness, trauma informed care and cultural competency for all staff. To prevent additional emergency room visits or readmissions, the clinic linked patients recently discharged from the hospital into follow up care. In addition to annual depression and behavioral health screenings, the clinic also partnered with community mental health providers to offer timely behavioral health care, when needed. Other activities conducted by the ACHP HEZ included home visits, annual domestic violence screenings, medication reconciliation, and a variety of nutrition classes and walking groups to support patient self-management.

As a result of these efforts, the following patient outcomes were accomplished by September 30, 2016:

- 480 individuals provided smoking cessation workshop
- 426 patients provided care coordination services
- 1,113 participants in blood pressure screening
- 62 participants in the diabetes self-management program
- 410 participants in healthy lifestyle activities
- 1,106 participants in community health events

Metrics reported for the ACHP HEZ and Morris Blum Clinic in 2018 show continued growth in chronic disease management and improved health outcomes. The clinic exceeded baseline performance and improvement goals in all four measures: poorly controlled A1C, hypertension control, measurement of BMI and follow-up of abnormal BMI, and screening/cessation intervention for tobacco use (Cameron, 2018).

Overall, the ACHP HEZ was able to increase and maintain medical service capacity, provide health care to thousands of patients, and offer a number of interventions to address cardiovascular risk factors, diabetes, hypertension, obesity and smoking in the Annapolis community. Navigational services and community partnerships to address non-medical needs such as housing and food insecurity were also important components of the ACHP strategy.

Competent Care Connections (CCC) HEZ

The CCC HEZ utilized funds to expand primary care and behavioral health services in rural Caroline and Dorchester Counties; targeting workforce development and increasing community health resources. The primary goal of the HEZ was to reduce risk factors and improve outcomes related to diabetes, hypertension, asthma and behavioral health.

The CCC HEZ expanded the primary care and community health workforce by adding over 30 jobs (30.1 FTEs) to the area including primary care providers, community health outreach workers (CHOWs), care coordinators and peer recovery support specialists for mental health and substance use; all whom received training in cultural competency, trauma informed care and health literacy (MDHMH, 2017). The HEZ partnered with community organizations such as the Choptank Community Health System and Associated Black Charities CHW Team to provide care coordination services, develop a HEZ electronic health record, and offer an assortment of health education and wellness programs. In particular, the CCC HEZ supported an intensive obesity treatment program (Maryland Healthy Weighs) for low-income patients, offered telehealth services, and established the Dorchester School Based Wellness Center which implemented an evidence-based asthma management program and provided mental health care and counseling services (Mercier, 2018 & Gaskin et al., 2018).

The CCC HEZ also created a new Mobile Crisis Team (MCT) that delivered mental health/behavioral health crisis intervention, assessment, and referral services to community members in need. As of September 30, 2016, the MCT had served 636 individuals and had reduced the response time to mental health crises in Caroline and Dorchester Counties from over one hour to just 19 minutes. The MCT generated potential savings of nearly $1.2 million by facilitating 545 emergency department diversions and 1,525 initial and follow-up dispatches (MDHMH, 2017). In addition, the CCC HEZ opened the Federalsburg clinic, a community-based, outpatient mental health clinic for adults, which had served 430 patients in 10 months.

As a result of these efforts, the following patient outcomes were accomplished by September 30, 2016 (MDHMH, 2017):

- 27,087 visits provided throughout the CCC HEZ to 6,098 unduplicated patients and clients (Mercier, 2018)
- 464 participants in peer recovery support
- 534 participants in weight management program
    - In 121 patients who completed Maryland Healthy Weighs for more than 8 weeks, the average BMI was reduced by 13%, resulting in an estimated savings of $11,000 in annual medical costs for each patient (Mercier, 2018).
    - In a subset of patients who completed at least eight weeks of the program from April-September 2016, all (100%) of the diabetic patients had a reduction or elimination of diabetic medications and 67% of hypertensive patients had a reduction or elimination of high blood pressure medications. (MDHMH, 2017)
- 409 patients provided care coordination services
- 940 students provided somatic health services
- 521 students provided mental health services

- Over 3,200 individuals provided education or health screenings by CHOWs
- Additional 28 hours/per week of Nurse Practitioner coverage at Dorchester School Based Wellness Center

Overall, the CCC HEZ increased access to primary care services and behavioral health resources in some of the most underserved communities in Caroline and Dorchester counties. This resulted in improvements in chronic diseases (diabetes, hypertension and asthma), behavioral health outcomes and reduced medical costs. Most CCC HEZ participants were White (52.6%), but as compared to the total HEZ population, the CCC HEZ served a higher proportion of Black/African American patients (40.2% vs. 29.0%).

Greater Lexington Park (GLP) HEZ

The GLP HEZ utilized funds to expand access to primary care, behavioral health and dental services in a community of St. Mary's County that chronically lacked primary care providers. A primary goal of the HEZ was to improve outcomes related to hypertension, asthma, diabetes, congestive heart failure and chronic obstructive pulmonary disease (COPD).

The GLP HEZ expanded access to health services by adding over 16 jobs (16.2 FTEs) to the Greater Lexington Park community including primary care physicians, a physician assistant, a nurse practitioner and a buprenorphine-certified physiatrist. The GLP HEZ also facilitated the opening of a new primary care office at MedStar St. Mary's Hospital (MSMH) until the construction for the HEZ supported community health center, East Run Medical Center, was completed in the spring of 2017. The medical center includes a medical clinic, behavioral health and dental services.

In addition to recruiting new providers, the GLP HEZ also developed a clinical care coordination program, implemented an electronic prescription system, utilized community health workers, integrated care coordination software system with MSMH's electronic medical record, and provided a selection of evidence-based health programming, including the Hair, Heart and Health Program. To address transportation barriers experienced by community members, the GLP HEZ established a 16-stop mobile medical route to be used for rides to medical appointments and other human services. The HEZ also equipped a mobile dental van and expanded the transportation program to include a high-demand specialty transportation service. Integrating the work of HEZ practitioners with existing community resources such as MedStar St. Mary's "Get Connected to Health" mobile clinic allowed the GLP HEZ to collectively provide 22,139 visits to 3,847 patients. The GLP HEZ served a higher proportion of Black/African American patients as compared to the total HEZ population. Trauma informed care training was provided for all staff of the HEZ and MSMH.

As a result of these efforts, the following patient outcomes were accomplished by September 30, 2016:

- 1,415 patients served by "Get Connected to Health" mobile clinic
- 2,335 patients provided behavioral health services
- 981 patients received care at MSMH Primary Care Office

- 77 patients provided serves by mobile dental van
- 11,359 patient encounters with community health workers
- 1,464 patients provided care coordination services
- 15,364 rides provided by HEZ Mobile Medical Route
- 738 rides provided by medical specialty service

Overall, the GLP HEZ significantly increased access to primary care, behavioral health and community health resources in St. Mary's County by expanding and integrating services with community partners. Through connecting thousands of patients to primary care and specialty services, the HEZ was able to reduce risk factors and improve outcomes related to hypertension, asthma, diabetes and other cardiovascular diseases.

Prince George's County (PGC) HEZ

The PGC HEZ utilized funds to increase access to primary care services in Capitol Heights by expanding the health workforce and establishing four Patient Centered Medical Homes (PCMH) and one specialty care practice. The primary goals of the HEZ were to provide services to at least 10,000 residents and improve outcomes related to asthma, diabetes, and cardiovascular disease.

The PGC HEZ added over 18 jobs (18.3 FTEs) in Prince George's County including physicians and nurse practitioners. Collectively, through enhanced practices with community partners, 63,748 visits to 38,343 patients were provided throughout the HEZ. The PGC HEZ utilized community health workers, care coordination services targeting high risk patients, a case management software system for tracking patient activities, and the use of individualized patient Wellness Plans. In addition, the PCMHs in the HEZ were supported by a robust Community Care Coordination Team and a county-wide Public Health Information Network that linked to the Maryland health information exchange. The Care Coordination Team established partnerships with two local hospitals, eight County agencies, state/federal partners and numerous other providers in the area including Fire/EMS personnel, case managers, home health providers and pharmacists. To link HEZ clients to medical, clinical and social services, the Community Care Coordination Team created over 20 standardized, evidence-based Care Pathways (Gaskin & Thorpe, 2018).

A Health Literacy Mobile App and comprehensive health literacy campaign was also developed by the PGC HEZ, inclusive of Health Literacy Ambassadors and cultural/linguistic competency training for all HEZ providers and staff. Community health workers were also required to complete training in management of chronic conditions, diabetes self-management and trauma informed care. Five health literacy community forums were held and 8,000 "Medical Action Plan" booklets were distributed to households in Capitol Heights (Carter, 2018). In concordance with the total HEZ population, the PGC HEZ primarily served Black/African American patients (84.4%), but also served a higher proportion of Hispanic/Latino patients as compared to the total HEZ population (14% vs. 6.7%).

The PGC HEZ also deployed Prime Time Sister Circles, a behavioral health intervention operated by the Gaston and Porter Health Improvement Center, designed to assist African American women with addressing stress management, nutrition, fitness and hypertension.

As a result of these efforts, the following patient outcomes were accomplished by September 30, 2016:

- 896 patients served by CHW Care Coordination Program
- 14,587 patient encounters with care coordinators
- 2,232 Wellness Plans created for HEZ patients
- 11,574 completed client resource connections
- 87% of women attending Prime Time Sister Circles reported gaining additional knowledge and skills; significantly decreasing their stress and unhealthy nutrition habits; and increasing their exercise behaviors (Carter, 2018)

Overall, the PGC HEZ increased access to primary care in the Capitol Heights community and exceedingly reached their goal of providing services to 10,000 residents. The HEZ expanded the community health workforce, increased community health literacy and engaged with a number of community partners to establish an effective population health approach to care. In turn, these efforts reduced risk factors related to asthma, diabetes, and cardiovascular disease.

West Baltimore Primary Care Collaborative (WBPCC) HEZ

The WBPCC utilized HEZ funds to increase access to primary care and community health resources in Baltimore City. The primary goal of the HEZ was to improve outcomes related to cardiovascular disease, diabetes, hypertension and obesity.

The WBPCC HEZ increased the primary care workforce by adding nearly 10 jobs (9.8 FTEs) in West Baltimore and extensively integrating health care practices with community partners. Collectively, the HEZ and their community partners provided 187,981 visits to 118,339 patients throughout the zone. Most of the residents in the WBPCC HEZ were Black/African American, but the HEZ also served higher proportions of Hispanic-Latino and Asian patients as compared to the total HEZ population. HEZ providers and staff received extensive cultural competency training.

The WBPCC HEZ strategy included: developing a two-tier (30 day and 60 day) care coordination program with special emphasis on high emergency department utilizers, training and deploying community health workers for targeted outreach, facilitating PCMH training for clinical partners, and offering chronic disease self-management classes and fitness programs. Community health workers provided health screenings, education and conducted patient visits in the emergency department, home and clinic. In addition, the HEZ provided over 100 health or social service career scholarships and internships to HEZ residents. These scholarships were predominantly awarded to students in entry level health professional programs and are anticipated to add a significant number of future FTEs in the community.

To support programs and strategies to improve cardiovascular health, the HEZ also provided 16 mini-grants to community-based organizations. Community outreach and health education events held in the HEZ included health fairs, a bi-monthly Produce Market, and free health promotion courses on nutrition, healthy cooking, physical activity, blood pressure screenings and smoking cessation. Weekly fitness classes offered free of charge through neighborhood recreation centers

included activities such as kick-boxing, line dancing, yoga, and Zumba. To further incentivize risk reduction, the WBPCC HEZ also implemented the Passport to Health Program which enrolled participants and awarded points for healthy behaviors.

As a result of these efforts, the following patient outcomes were accomplished by September 30, 2016:

- 10,368 individuals connected with a community health worker
- 430 participants in Stanford Chronic Disease Self-Management Program
- 4,151 participants in WB CARE Fitness Program
    - Average weight loss of 15 pounds and reduction in 1.5 of BMI among 2,017 sample of fitness class participants
- 6,121 residents enrolled in Passport to Health Program
- 25,000 residents served through community cardiovascular disease prevention programs

Overall, the WBPCC HEZ increased capacity for primary care and community health resources in West Baltimore. Through enhanced care coordination services for targeted patients and offering extensive community-based health programming like walking groups and cooking classes, the HEZ was able to reduce risk factors and improve health outcomes related to cardiovascular disease, diabetes, hypertension and obesity.

Summary & Conclusion

Maryland's five Health Enterprise Zones were each able to improve the health of their respective community members. Although there was variation between the activities conducted by each HEZ, the common goals were to reduce health disparities, improve health care access and health outcomes, and reduce healthcare costs and hospital admissions/readmissions. All of the HEZs sought to reduce diabetes and cardiovascular disease related illnesses and associated risk factors. In addition, some HEZs also addressed asthma, behavioral/mental health and obesity. The main activities of each HEZ are briefly described below:

- The Annapolis Community Health Partnership HEZ established a primary care medical home in a residential public housing facility to provide care and coordination services to residents living in and around the building, especially high utilizers of hospital care.
- The Caroline/Dorchester Counties' HEZ expanded primary care and behavioral health services in a rural area by establishing a school-based wellness center, opening an adult mental health clinic, providing a community health worker training program, offering care coordination services through community partnerships, supporting an intensive obesity treatment program and deploying a mobile mental health crisis team.
- The Prince George's County HEZ established four Patient Centered Medical Homes and one specialty care practice, created a Community Care Coordination Program to link high-risk patients with services and implemented a Public Health Information Network and comprehensive Health Literacy Campaign.
- The Greater Lexington Park HEZ expanded primary and behavioral health care services in St. Mary's County by opening a primary care office, community health center and a mobile dental van, in addition to implementing a transportation program and providing clinical care coordination services to high utilizers.

- The West Baltimore HEZ developed a tiered care coordination program to target high utilizers, awarded health career scholarships and career readiness trainings, provided community-based health education programs and health screenings, and delivered fitness classes to reduce risk factors for obesity and other chronic conditions.

Each HEZ utilized the financial incentives of the HEZ initiative to expand the availability of primary care in their communities and to employ community health workers to address clinical and social risk factors of vulnerable patients. In total, the five HEZs provided over 300,000 visits to more than 170,000 individual patients during this pilot program.

In addition, residents and providers in the HEZs both had positive experiences with the initiative. During interviews and focus groups with HEZ residents, the majority expressed that they were either very satisfied or satisfied with the services they received and that the quality of care was either excellent or good. Residents also reported improved access to health care services and that the HEZ initiative helped them change their health behavior or healthcare practices. For instance, participants shared examples of increased physical fitness and decreased alcohol consumption. Participants unanimously thought that the HEZ should continue. During interviews with HEZ providers, all expressed that the objectives of the HEZ initiative were well suited to the needs of the community. All providers felt that the HEZ initiative had been successful in improving access to care and also helping patients with chronic disease management. In particular, HEZ providers highlighted the importance of preventive services and health education for patient populations that are often marginalized.

Overall, the Health Enterprise Zones were able to positively impact individual health behaviors and favorably influence health in the community. Improved health outcomes associated with diabetes, cardiovascular related illness and other chronic conditions are the result of a variety of creative community-based solutions. The Health Enterprise Zones Initiative can serve as a model for future programs aiming to address racial/ethnic health disparities, improve access to health care, and reduce health care costs in low-income and medically underserved communities.

References

Cameron S., Czapp P. (2018, February 23) The Annapolis Community Health Partnership. [presentation] Maryland Health Enterprise Zones Site Visit. Available from https://health.maryland.gov/healthenterprisezones/SiteAssets/Pages/publications/Annapolis%20Community%20Health%20Partnership%20HEZ%20Presentation.pdf

Carter, E.L. (2018, February 23) Prince George's County Health Department ,The Health Enterprise Zone: A Population Health Model for Patients with Complex Needs. [presentation] Maryland Health Enterprise Zones Site Visit. Available from https://health.maryland.gov/healthenterprisezones/SiteAssets/Pages/publications/Prince%20George%27s%20County%20HEZ%20Presentation.pdf

Chen, J.C., Mann, D.A., Hussein, C. A. Maryland Department of Health and Mental Hygiene. (2012). Maryland Chartbook of Minority Health and Minority Health Disparities Data. Available from https://health.maryland.gov/bonha/Documents/Maryland%20Chartbook%20of%20Minority%20Health%20and%20Minority%20Health%20Disparities%20Data,%20Third%20Edition%20(December%202012).pdf

Dwyer, M. (2017). Maryland's Health Enterprise Zones Initiatives: Upstream Strategies to Address Social Determinants of Health. [presentation] Maryland Rural Health Association Conference. Available from https://www.mdruralhealth.org/wp-content/uploads/2017/10/K-Marylands-Health-Enterprise-Zones.pdf

Gaskin, D. J., Thorpe, R.J. (2018). External Evaluation of the Maryland Health Enterprise Zones Initiative Year 4 Consolidated Report. Johns Hopkins University.

Gaskin, D. J., Vazin, R., McCleary, R., & Thorpe, R. J., Jr (2018). The Maryland Health Enterprise Zone Initiative Reduced Hospital Cost And Utilization In Underserved Communities. *Health affairs (Project Hope)*, *37*(10), 1546–1554. https://doi.org/10.1377/hlthaff.2018.0642

Hussein CA, Luckner M, Samson R, Matsuoka K, Mann DA, Rekhi R, et al. (2014). Working with communities to achieve health equity in Maryland's five Health Enterprise Zones. *J Health Care Poor Underserved*. 25(1, Suppl):4–10.

Mann, D.A. (2019). The Business Case for Addressing Health Equity and Cost Reduction by Targeting Preventable Utilization. [presentation] Maryland Office of Minority Health and Health Disparities 16th Annual Health Equity Conference. Available from https://health.maryland.gov/mhhd/Documents/MHHD%20HEC%202019%2012%2005%20pp.pdf

Mann, D.A. (2020). Health Equity and COVID-19 Data in Maryland. [presentation]. Presentation to Louisiana Governor's Taskforce on COVID-19 and Health Equity. Available

from https://health.maryland.gov/mhhd/Documents/Maryland%20COVID-19%20Data%20By%20Race%20and%20Ethnicity%20July%202020%20pp.pdf

Maryland Department of Health and Mental Hygiene, Maryland Community Health Resources Commission. (2014). Maryland Health Enterprise Zone Program 2013 Annual Report. Available from https://health.maryland.gov/healthenterprisezones/Documents/2013%20HEZ%20Annual%20Report.pdf

Maryland Department of Health and Mental Hygiene, Maryland Community Health Resources Commission. (2017). 2016 Legislative Report of the Health Enterprise Zones Initiative. Available from https://health.maryland.gov/healthenterprisezones/Documents/HEZ%20Annual%20Report%202016.pdf

Maryland Department of Health and Mental Hygiene. (2012). 2012 Joint Chairmen's Report, page 79, M00R01.03—Maryland Community Health Resources Commission— Health Enterprise Zones. Available from: https://health.maryland.gov/healthenterprisezones/Documents/HEZ-JCR-Report-submitted-Aug-15-2012.pdf

Maryland Health Improvement and Disparities Reduction Act of 2012. (2012). Maryland Senate Bill 234, Chapter 3.

Maryland Health Quality and Cost Council. (2012) Health Disparities Workgroup Final Report and Recommendations. Annapolis, MD: Maryland Health Quality and Cost Council. Available from https://www.kff.org/wp-content/uploads/sites/2/2012/02/disparitiesreport120117.pdf

Mercier, A. (2018, February 23) Carolina-Dorchester HEZ Competent Care Connections. [presentation] Maryland Health Enterprise Zones Site Visit. Available from https://health.maryland.gov/mhhd/Documents/Maryland%20Health%20Improvement%20and%20Disparities%20Reduction%20Act%20o.pdf

U.S. Department of Health & Human Services, Office of Minority Health. Profile: Black/African Americans. (2019) Available from https://www.minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=61

U.S. Department of Health & Human Services, Office of Minority Health. (2019) Profile: American Indian/Alaska Native. Available from https://www.minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=62

U.S. Department of Health & Human Services, Office of Minority Health. (2019) Profile: Hispanic/Latino Americans. Available from https://www.minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=64

Table 1: The Location, Size, Lead Organization and Disease Focus of Each Health Enterprise Zone.

Health Enterprise Zone	Jurisdiction	Community (Zip Codes)	Population	Coordinating Organization /Coalition	Budget (2013-2016)	Core Disease States/Focus
Annapolis Community Health Partnership	Anne Arundel County	Annapolis, Morris Blum Public Housing Building (21401)	36,805 (Suburban)	Anne Arundel Medical Center	$800,000	- Diabetes - Hypertension - Obesity - Smoking
Competent Care Connections	Caroline & - Dorchester Counties	Mid-Shore Region (21613, 21631, 21643, 21835, 21659, 21664, 21632)	36,123 (Rural)	Dorchester County Health Department	$2,936,000	- Asthma - Behavioral/Mental Health - Diabetes - Hypertension - Obesity
Greater Lexington Park	St. Mary's County	Greater Lexington Park (20634, 20653, 20667)	34,035 (Rural)	MedStar St. Mary's Hospital	$3,000,000	- Asthma - Behavioral/Mental Health - Congestive Heart Failure - COPD - Diabetes - Hypertension
Prince George's County	Prince George's County	Capitol Heights (20743)	38,626 (Suburban)	Prince George's County Health Department	$4,400,000	- Asthma - Diabetes - Hypertension
West Baltimore Primary Care Access Collaborative	Baltimore City	West Baltimore (21216, 21217, 21223, 21229)	137,823 (Urban)	Bon Secours Baltimore Health System	$4,200,000	- Diabetes - Heart disease - Hypertension - Obesity