HSCRC Transformation Implementation Program
The Community Health Partnership of Baltimore

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Background

The approval of the all payer hospital payment model in January 2014 aligns hospital incentives with community and primary care efforts to improve health by shifting from a traditional fee-for-service (FFS) payment model to a global budget. The success of the new payment model is time sensitive, creating a sense of urgency to transform the delivery system from volume to value. Partnership across city hospitals to address regional health offers a new perspective and new opportunities to come together to address health determinants that greatly effect individuals across the geographic area. By partnering across hospitals, primary care practices, community organizations, and skilled nursing facilities, this regional partnership hopes to begin changing the drivers of health in Baltimore City that have led to the high utilization and poor health outcomes seen in this region today to a long term financially sustainable model with improved health outcomes in this region tomorrow.

Through the HSCRC/DHMH Regional Community Health Partnership planning grant, the Johns Hopkins Hospital (JHH) convened a collaborative planning process, bringing together hospital partners in Baltimore City as well as a broad spectrum of other community-based partners, to share programs, experiences, and data with the goal of developing a regional approach for care coordination. See Appendix A for the planning grant structure. The partners evolved during the planning process and now include six hospitals: The Johns Hopkins Hospital (JHH) (lead applicant), Johns Hopkins Bayview Medical Center (JHBMC), Mercy Medical Center (MMC), Sinai Hospital, MedStar Franklin Square Hospital, and MedStar Harbor Hospital. All six partner hospitals serve similar patient populations, share many patients, and all are challenged to reduce unnecessary inpatient and emergency department utilization. From this collaborative process came the Community Health Partnership of Baltimore and an intervention framework designed to deliver effective care coordination with a focus on social determinants for our target population, see Appendix B.

The Community Health Partnership of Baltimore (the Partnership) intends to leverage and rapidly expand the innovative work and lessons learned from J-CHiP and other initiatives across the region. The Johns Hopkins Community Health Partnership (J-CHiP), developed through a CMS Center for Medicare & Medicaid Innovation (CMMI) Health Care Innovation Award, is a trans-disciplinary care coordination program designed to improve the quality and efficiency of care across the continuum for high-risk adults in 7 zip codes in East Baltimore. This is just one of the many innovations that have been deployed by the hospitals in the Partnership. By building on the work to date, we have been able to create a comprehensive, "shovel ready," integrated program to achieve the three part aim of improved population health, improved patient experience, and reduced per capita costs. We are all excited to have the opportunity to build on the successes of the individual hospitals in the Partnership to create a more comprehensive approach to our complex patient population. The collaborative spirit among the hospitals has been especially rewarding, and we look forward to continuing to develop these relationships and to the greater impact we expect to have as a result of working together.

1. Target Population

According to annual county health rankings (www.countyhealthrankings.org), Baltimore City ranks lowest among all counties in the state for both health outcomes and health factors that contribute to these outcomes, such as health behaviors, environmental context, and social and economic factors. Baltimore City, home to 622,800 residents, suffers from disproportionately high rates of poverty, crime, housing vacancies, and unemployment; from high infant mortality rates, and from high rates of chronic disease, including heart disease, kidney disease, HIV/AIDS, and stroke. Unhealthy behaviors (e.g., smoking, poor diet, non-adherence) and social barriers (e.g., poor social support, mistrust) aggravate the

problems (http://www.countyhealthrankings.org/app/maryland/2015/rankings/baltimore-city/county/outcomes/overall/snapshot). The high levels of hospital utilization and social challenges seen in Baltimore City made choosing a target population difficult; however the high utilization rates for Medicare, Medicaid, and dually eligible patients in particular represent the greatest opportunity to reduce potentially avoidable hospital utilization across Baltimore City.

In alignment with the HSCRC and the West Baltimore Collaborative, the Community Health Partnership of Baltimore defines high utilizers as those who experienced three or more hospitalizations in the past year, with initial focus on Medicare beneficiaries and patients who are dually eligible for Medicaid and Medicare with the ultimate goal of meeting all payer needs. As the Partnership ramps up, Medicaid high utilizers will also be considered for the target population. This alignment is ideal as we all work towards the shared goal of improving quality of care by reducing avoidable hospitalizations. Furthermore, in defining our target population, it was reasonable to narrow the population to those individuals who received service from at least one of the partner hospitals in 2014.

Geographically, the target population resides in the following 19 zip codes: 21202, 21205, 21206, 21209, 21211, 21213-19, 21222-25, 21230, 21231, and 21237 which is representative of the combined community benefit service areas (CBSAs) of the partner hospitals. These zip codes cover a large part of Baltimore City, but the combined CBSAs of the partner hospitals overlap significantly with the area designated for the West Side Collaborative. To better characterize and attribute patients in our geographical area to partner hospitals and because of limitations with available CRISP and HSCRC data, the Partnership began working with the Berkley Research Group (BRG) to further define the target population. All the hospital partners had previously consented to sharing their case mix data with BRG, who was able to provide more detailed data on the target population of high utilizers.

More specifically, BRG's baseline analyses defined the target population by those with Medicare and dual-eligible beneficiaries, 18 years or older residing within the 19 zip code catchment area with 3 or more hospitalizations at one of six partner hospitals. They specifically focused analyses on chronic conditions and potentially avoidable causes of hospitalizations, and included information on mental health and substance abuse disorders (see Appendix C) in FY2015. Deceased patients were excluded from the analyses. Using these criteria, BRG identified 3,148 unique high utilizers (all payer) who, combined, had a total of 11,247 inpatient visits in FY2015. Among these high utilizers, 904 were Medicare beneficiaries and 808 were dually eligible for Medicare and Medicaid. Looking at the inpatient utilization specific to this population, 30% of utilization is associated with conditions that are potentially avoidable through early identification and better coordinated care across the continuum. The dual population, on the other hand, has ED utilization 2.6 times that of the Medicare-only population, providing an opportunity for measurable improvement. Medicaid was the payer for an additional 1,105 of the high utilizers identified. In alignment with the West Side Collaborative, our initial target population will focus on the 1,712 patients in the combined Medicare and dual population. As new individuals become eligible for our target population, they will be prioritized for outreach.

The top primary diagnoses in the target population identified by BRG were heart failure, sepsis and disseminated infections, renal failure, chronic obstructive pulmonary disease, diabetes, hypertension, obesity, pneumonia and hepatitis. Mental health conditions and substance use disorders were also highly prevalent; 61% (547) of Medicare patients and 78% (627) of dually eligible patients had a mental health condition or substance use disorder. In addition, 95% of Medicare patients and 93% of dually eligible patients had at least two chronic conditions. Total charges for the combined Medicare and dually eligible population in FY2015 were $119,400,000. The Community Health Needs Assessments for

the partner hospitals corroborate these data; the top chronic conditions leading to morbidity and death as identified in these assessments are heart disease, stroke, diabetes, COPD, and cancer. Data from the Johns Hopkins Community Health Partnership (J-CHiP) and the Johns Hopkins Medicine Alliance for Patients (JMAP) ACO further confirm the list of conditions identified by BRG.

Given the high prevalence of chronic conditions, behavioral health needs, and social needs in our target population, a package of interventions was designed by the Partnership to address these needs and gaps in care across the continuum by building on existing care coordination and population health initiatives in place across the city (See Section 2 for more details on the interventions). Long term, the partnership expects to touch as many individuals in the target population as possible, however shorter term, the target population will need to be stratified in order to deploy meaningful interventions for those with the greatest need. The number of individuals who qualify for each intervention will be determined as information becomes available from CRISP and BRG. Further, the pool of patients eligible for an intervention is expected to change somewhat across years, and individuals who become newly eligible will be incorporated into Partnership interventions as capacity allows. The Partnership will also accept direct referrals from providers.

One of the goals of the Partnership is to complement and build on existing local health improvement initiatives, such as Patient Centered Medical Home (PCMH) models, JMAP, J-CHiP, and other ongoing regional transformation initiatives in Baltimore City. In order to maximize existing intervention infrastructure, processes will be created to ensure that any patients involved with other ongoing transformation initiatives do not receive duplicated services, but also benefit from additional services that the Partnership can provide to supplement ongoing care. For example, stratification processes will ensure that patients who are enrolled in J-CHiP who met their goals and have lower level needs will receive services through other existing less intensive management programs. These patients will remain engaged with primary care, but could also be eligible for the Community Health Partnership of Baltimore interventions in the future if their needs change. Participants in the JMAP ACO will also be evaluated to see if additional services from the Partnership, such as the Bridge Team services, would be beneficial. With the appropriate permissions in place, the Johns Hopkins Adjusted Clinical Groups (ACG) Case Mix System will be used to identify those who are most likely to benefit from additional supports from the Partnership interventions.

2. **Proposed Program and Interventions**

In designing interventions, the Partnership's initial focus was to address current gaps in the regional system's ability to coordinate care for the target population while thinking longer term about how to strengthen community services that can address the social determinants of health that contribute so heavily to population health outcomes. Care was thought of as a continuum and the care coordination needed across that continuum was vital to each of the interventions. The interventions were designed for each part of the continuum, specifically primary care, acute care and sub-acute care. The strategies identified, incorporated coordination across the different settings to ensure patients are moving across the settings and receiving care in settings that are the most appropriate.

Description of the Proposed Interventions

Based on the health needs and conditions defined in the geographic area in the Partnership's target population, the Community Health Partnership of Baltimore assembled a suite of interventions across partners and settings in the zip codes of the Partnership. These interventions are meant to wrap around the Medicare high utilizer population at each point of interaction with the health system and in the community to address these gaps and to create person centered teams which can address individual

needs across the spectrum. By being patient-centered, our goal is that each intervention has positive direct impact on future utilization and that results in overall positive savings in the system.

In determining how best to target our high utilizer population, the initial focus was on how this population was currently interfacing with interventions already in place across the region, and more specifically, how this population was currently interacting with primary care and care management services. For the purposes of this planning grant, the focus is on the interventions deployed in the primary care setting and the post-acute setting. The acute setting is very much a part of the continuum but has been funded through prior increases in hospital rates. For more information on interventions that are being deployed in the acute setting see Appendix D. Green denotes interventions that are shovel-ready for immediate implementation; yellow denotes interventions that will be deployed within months after funding is received. Many of the interventions will be used across all of the hospital partners and others will be used by only some. See Table 4 for more details.

CARE COORDINATION IN THE COMMUNITY

Intervention: Primary Care team/care coordination

Over the course of the 3-year implementation of J-CHiP, Johns Hopkins established embedded teams at eight primary care sites within the geographic footprint as the Partnership target zip codes. We will deploy this existing operational capacity with staff that is trained and experienced in serving this high-need population. Thus we are ready to implement this intervention within 30 days of receiving the award.

Linkage with primary care is the critical first step of this intervention. Once individuals in the target population have established linkages with primary care, the Community Health Care Teams will work within existing services to meet the needs of the high-risk population and coordinate their care. The Community Health Partnership of Baltimore recognizes that currently, many large primary care practices in the region have established PCMHs with a range of services provided, while other smaller practices may not be PCMH or may not have care management services. Even among practices which do have care management services, not all practices have health behavior specialists as part of their care teams, who are important for addressing the needs of high utilizers with mental and substance abuse challenges. Therefore, the linkage opportunities among individuals who have an established relationship with a primary care practice are the following:

1. **For individuals with high medical and low mental health/substance abuse needs:** Provide embedded care management services using medical case managers for high utilizers who are engaged with non PCMH practices or practices that otherwise do not have an established care manager. For high utilizers who subscribe to PCMH practices that have established CM services, ensure that these patients have an established care manager.

2. **For individuals with low medical and high mental/substance abuse needs:** Provide embedded Health Behavior Specialists to serve as a primary case manager for patients engaged with practices that do not offer health behavior specialist services as part of the care team approach.

3. **For individuals with high medical and high mental/substance abuse needs:** Provide embedded care management and Health behavior specialist services for patients who currently are part of an established primary care practice, but who are not receiving these types of interventions.

To respond to these opportunities, the Community Health Care Teams will expand on existing services where necessary to create primary care teams that are made up of primary care providers, case managers, health behavior specialists, and community health workers. Wherever possible, care managers and health behavior specialists will be embedded within the primary care practices to work closely with the primary care providers. For smaller practices that see individuals in the target population, this team would work geographically and would not be based in a specific practice.

Providers will have, at minimum, monthly scheduled rounds with the CM/HBS for those patients referred to and engaged in case management. Care team members will have opportunities between rounds to consult on an ad hoc basis for day-to-day urgent needs. If social needs are identified, the CM/HBS will work with the CHW in the community to address these needs. The CHW will be employed by a community-based partner organization that has knowledge and expertise of the resources available in the identified community.

"Communities" will be defined by the zip codes of the patient's home address for the purposes of allocating CHWs. The CM will provide clinical oversight and direction to the CHW and have weekly rounds with the CHW. The input from the CHW will be incorporated into the CM notes and updates will be provided to the PCP during rounds. See Appendix E for team member roles and responsibilities.

TRIPLE AIM: Decrease in potentially avoidable utilization; improved health outcome.

Intervention: The Bridge Team(s)

The Bridge Team(s) will be a community based, multidisciplinary intervention team made up of a Medical Consultant, a Health Behavior Specialist and a HBS Team Lead (LCSWs), a Nurse (RN), a Psychiatrist, an Addiction Medicine specialist, and community health workers. The Bridge Team is modeled after Assertive Community Treatment (ACT) teams that traditionally have been used to assist people with high behavioral health needs by providing ongoing care in the community (SAMHSA, 2008). The Bridge Team(s) model is based on an ACT staffing model with modifications made for the short duration of services to be delivered (30 days on average with flexibility up to 60 days).

Data from CRISP and BRG demonstrates that a large number of high utilizers in the Community Health Partnership of Baltimore target population experience behavioral health challenges and that these individuals are more difficult to engage in appropriate primary and behavioral health care services.

The goal of the Bridge Team(s) is to engage individuals, provide support services needed to maintain stability in the community, and facilitate the transition of patients to longer-term more comprehensive behavioral and/or medical care. The Bridge Team(s) will receive referrals from all partner hospitals and community physicians in the Partnership and may be spread across two locations. We will work with the Behavioral Health System of Baltimore (BHSB), the local behavioral health authority for Baltimore City, to ensure transitions to longer term treatment for mental health and substance use disorders. We will also work with BHSB on the Bridge Team's role to enhancing the crisis response system and also develop a plan to sustain the Bridge Team(s) as part of that system. We anticipate that, given the intensity of services that will be needed to engage people in care, this team will be able to manage 300 to 400 people during the course of a year. See Appendix F for the list of services the Bridge Team(s) will provide.

TRIPLE AIM: Decrease in total utilization; improved health outcomes (e.g. longer life expectancy).

Intervention: House Calls – Primary care for patients that are home bound

The Home-Based Primary Care (HBPC) Program would function as a community-based program that provides home-based medical care, care management, caregiver support, counseling, and acute inpatient continuity to high-need, high-cost home-bound individuals on a longitudinal basis. The HBPC program is built around an interdisciplinary care team consisting of physicians, nurses, mid-level practitioners, social workers, and other health care professionals that coordinates social and medical services to help patients manage severe chronic illnesses and disabilities. The proposed model is based on the MedStar Washington Hospital Center Medical House Call Program that has demonstrated acute and post-acute care Medicare cost savings of over $4,200 per patient per year (De Jonge, 2014). Additionally the model provides acute-care continuity by attending to the patient when they are admitted to the hospital. By leveraging the CRISP notification system and other healthcare technologies that did not exist a decade ago, the program will be able respond to real-time events and deliver the appropriate care needed with the goal of maintaining patients in their home.

The proposed model would build on the foundation of the current Johns Hopkins Bayview Medical Center HBPC program, which currently serves patients living within a 15-minute travel time radius of Bayview. After the Bayview HBPC program is augmented, we will expand its catchment area to serve the Community Health Partnership of Baltimore (planned Q3 of CY2016).

TRIPLE AIM: Decrease in total utilization; improved health outcomes; improved member experience including end-of-life planning.

Intervention: Community Health Workers

Frequently lack of information of health resources available can drive delay in seeking care or seeking it from inappropriate settings. Community Health Workers (CHWs) are public health workers who are trusted members of the community and have a good understanding of the needs of its residents as well as knowledge of health resources available in their community. This trusting relationship enables CHWs to serve as an intermediary between health and social services and the community and facilitate access to services and build patients capacity for self-care management through community education, informal counseling, social support and advocacy.

CHWs will be deployed to provide services to the intervention population to improve engagement and linkages to care. The primary roles of the CHW are intensive, longitudinal community-based care coordination to mitigate barriers to access, engagement, and adherence; regular home visits and accompaniment to appointments for health and social needs; facilitation of communication among patients, families, and providers; educating and empowering high risk patients and their families and caregivers health care members on how to effectively utilize the healthcare system for optimal health outcomes; and linking patients to community services and other resources as needed.

A critical component of this intervention is that the CHWs are truly community-based. As our partner in J-CHiP, Sisters Together and Reaching (STAR) employed five CHWs from the community, based at STAR and deployed to provide services to a defined sub-set of the J-CHiP target population. Our partnership with STAR has been a successful and rewarding component of J-CHiP, proving to have certain advantages over a more traditional clinic-based model for deploying CHWs, and STAR has agreed to continue to develop this model and to expand capacity as part of this proposal. See Appendix G for an overview of STAR.

Intervention: Neighborhood Navigators

The Neighborhood Navigator (NN) model draws on geographically- and census-based approaches to community health delivery in resource-poor settings and on histories of community organizing in East Baltimore. The NN model combines features of community health worker and peer advocate/mentor models. The primary roles of the Neighborhood Navigators are relationship building and social support**;** education, resource connection, linkage to care, outreach, and regular follow-up*;* informal monitoring and surveillance of unmet needs related to access to health care and human services*;* regular home visits to promote engagement and adherence and to mitigate barriers to care among a small caseload of high-risk patients; and capacity-building and mobilization of neighborhood residents through regular participation in and presentation to neighborhood association meetings.

The Neighborhood Navigator intervention is truly community-based. It was piloted as part of J-CHiP, with a cohort of approximately 30 navigators serving a few census tracts in zip code 21205 and managed by our community partner, Leon Purnell of the Men and Families Center (M&FC). See Appendix G for an overview of MFC.

Mr. Purnell and the M&FC will continue the current intervention in zip code 21205, an area that continues to have a high concentration of high-need high-cost patients and experiences significant health disparities. Mr. Purnell has agreed to continue to develop this model and expand capacity in other parts of the city through a possible partnership with another CBO in quarter 2 as part of this proposal.

TRIPLE AIM: Decreases in total utilization; improved health outcomes; improved patient experience.

Intervention: Patient Engagement Training (PET)

As we face new health care challenges and develop new models of delivery, we recognize that many of the health challenges facing our health system and our country are related to chronic health conditions that require health behavior change. Clinicians face pressure of limited time and increasing emphasis on outcomes. In addition, many providers have no formal training on the tactics and skills needed to facilitate patient engagement, effect health behavior change and promote patient satisfaction.

Since patient engagement is critical to success, we developed the Patient Engagement Training (PET) initiative for J-CHiP and JMAP staff and supervisors that leads to the development, maintenance, and utilization of patient engagement skills. We will expand that program to include the Community Health Partnership of Baltimore. The PET program:

- Helps providers and organizations realize the goals of patient centered care by changing the behavior in health care teams so we more fully assist patients in being active partners in their recovery and health care.
- Uses the evidence-based principles and skills of Motivational Interviewing (MI) to achieve behavior change by providers and patients.
- Recognizes that to maintain and develop skills, initial training must be combined with support and maintenance activities.

We developed and will expand to the Community Health Partnership of Baltimore an 8-hour curriculum to train staff on basic communication and motivational interviewing principles and skills to help and support patients in making incremental steps in a healthy direction to achieve behavior change. Core principles include a patient-centered approach related to respecting the patients' autonomy, working in partnership, listening more than telling, and recognizing readiness to change. Core skills include use of

open-ended questions, affirming the person, active listening, and summarizing. We are piloting a similar 4-hour curriculum for JMAP primary care providers and will also expand that to PCPs in the Community Health Partnership of Baltimore.

In addition to the training, we recognize it is important to maintain and practice these skills regularly. We identified Team Champions who help promote patient engagement skills & principles within their teams and develop team plans for continued engagement. We send out monthly "Tip-of-the-Month" emails that include helpful hints and a link to a short video on the monthly topic. Our leaders provide group and individual coaching to the Team Champions and monitor plan implementation; they also developed a menu of PET exercises that can be used within the health care team to highlight, review, and build skills.

In response, managers added patient engagement skills as a core competency on job descriptions. The PET program has developed a rating form for staff and supervisors to use to evaluate skills semi-annually. Examples of success include: care team use of PET language and concepts during team rounds; improving patients' self-monitoring and achievement of their health care goals in care plan; and changing behavior of care teams, providers and patients.

TRIPLE AIM: Improved patient experience.

CARE COORDINATION IN ACUTE HEALTH CARE SETTINGS

The unique regional structure of this collaborative to work across all partner hospitals and all settings provides opportunities to improve care coordination and ensure that primary care teams are kept informed during hospitalizations, ED visits, and in post-acute care settings. Poor communication and/or coordination among health team members is associated with medical errors and inefficient use of healthcare resources and interventions that improve communication and coordination across care teams have been shown to improve care quality, reduces medication use, decreases length of stay, and lowers costs. To date, each of the partner hospitals has created care coordination initiatives of their own. Many of the initiatives have recently been implemented and their effectiveness and ultimate value in transforming the health system to delivering on the objectives of the Triple Aim, in some cases has demonstrated success and in other cases, has yet to be determined. Under the Partnership, a learning collaborative will be established to refine and improve the initiatives under way. Continually learning about what interventions work, where, and for who will assist the hospitals in the Partnership in predicting which promising interventions could fruitfully be brought to scale in the Community Health Partnership of Baltimore. See Appendix D for acute strategies deployed in JHH.

Intervention: ED Coordination

Lessons learned in J-CHiP identified the need for CHW to be engaged with the case managers in the ED to effectively manage high risk patients post discharge from the ED. Under the Community Health Partnership of Baltimore, we plan to embed CHWs that will serve as navigators in the ED. In collaboration with community-based organizations (CBOs), CHWs will be identified and received standardized training by a CBO and embedded in the hospital ED to provide real-time referral/"hand-offs" for high-risk/high-utilizer patients requiring post-visit support for up to 60 days. The CHWs will connect patients with medical homes, promote primary care and help vulnerable patients address barriers to care. This intervention will complement the work of the community-based Bridge Team by focusing upon patients without high behavioral health needs who could use additional support with insurance enrollment, appointment scheduling/attendance, transportation and other social issues (Gary TL, 2003).

TRIPLE AIM: Decrease in ED utilization; improved health outcomes.

Intervention: Convalescent Care

The Convalescent Care Program (CCP) is operated by Health Care for the Homeless (HCH) to provide people experiencing homelessness who are discharged from the hospital a place to stay, rest, and recuperate from an acute illness or surgery. Recognizing that homelessness exacerbates health problems, complicates treatment, and disrupts continuity of care, CCP seeks to end the patient's cycle of homelessness and frequent hospitalizations.

CCP is a 20-bed unit staffed by HCH nurses, medical providers and social workers. Patients receive 12-hour-a-day nursing services such as medication education, care coordination and wound care. Patients receive social work services to link them to housing, income, mental health and addiction services. While at CCP, patients are assessed by an HCH medical provider and are provided routine health screenings and linkage to primary care. CCP patients also have access to the wide array of services provided by HCH. CCP is located in Weinberg Housing Resource Center, Baltimore's largest public emergency shelter, which is funded by Baltimore City and operated by Catholic Charities. The program has been run by HCH since 1987 in various shelters throughout the city.

When patients are released from the hospital the expectation is that recuperation will take place at home or in a skilled nursing facility. For patients experiencing homelessness, recuperation is difficult to achieve on the streets or in a shelter. Those with mobility difficulties, open wounds or difficulty managing post-acute care instructions are particularly at risk of returning to the emergency room or requiring re-hospitalization. The CCP allows clients to recuperate in a stable and safe setting while receiving medical, nursing and social work services. The goal is to reduce length of stay and hospital readmissions for this population.

TRIPLE AIM: Decrease in hospital utilization; improved health outcomes.

CARE COORDINATION IN POST-ACUTE SETTINGS

The post-acute inpatient population can be divided into three main populations: 1) patients requiring short-term skilled care for medical, nursing, and physical rehabilitation services upon hospital discharge; 2) patients requiring long-term or chronic nursing care due to functional impairments and need for personal care and nursing services, and 3) patients requiring end-of-life care for symptom management of pain and dyspnea, personal care, and psychosocial support. This post-acute care can be provided in nursing facilities and inpatient hospice or in the home by certified Home Health Agencies, Hospice, and private duty staffing agencies, families and friends. As hospital stays become shorter (and are often avoided altogether), patients receiving care from these types of providers are medically and socially complex and are at high risk for admission/readmission to hospitals and emergency departments.

In the Community Health Partnership of Baltimore, JHH, Bayview, Mercy, MedStar Franklin Square, MedStar Harbor, and Sinai will work to create a multi-hospital SNF collaborative building upon the work started at each of these institutions and focusing upon the implementation of evidence-based protocols and processes geared toward reducing preventable utilization (ED visits and readmissions) as well as improving care transitions from hospital to facility and facility to home. The collaborative will initially focus on two strategies, a nursing facility strategy and a strategy focused on home health.

TRIPLE AIM: Decrease in hospital utilization; improved health outcomes.

Intervention: Skilled Nursing Facility Collaborative

Under the Community Health Partnership of Baltimore, we will scale and spread the Post-Acute Preferred Provider Network initiated by LifeBridge Health to Skilled Nursing Facilities (SNFs) utilized by the regional partner hospitals to create a SNF Preferred Provider Network. Participation in the Network will be based on quality and process criteria that capitalize on best-practices for handoffs, reduce variation in care management and foster care coordination across the continuum of care.

In January, prior to the deployment of the Partnership, the partner hospitals will convene to develop the criteria for participation in the collaborative. In addition, the process for membership participation will be defined, a membership application will be developed and a timeline for enrolling SNF's in the collaborative will be established. Best practices for handoffs will be developed through the deployment and use of standardized discharge and communication protocols with the identification of contacts within each respective hospital within the Partnership.

TRIPLE AIM: Decrease in hospital utilization; improved health outcomes.

Intervention: Skilled Nursing Facility Protocols

Patients discharged from hospital to SNF are medically complex with high severity of illness and often have functional decline contributing to the medical necessity for discharge to SNF rather than to the community. Prior evidence demonstrates that the top diagnoses for patients with high readmission rates from the SNF were: Heart Failure, COPD, Sepsis and other infections, end of life and behavioral health problems. Based on that, the first strategy is to implement the following protocols in the SNFs serving discharges from partner hospitals:

- Heart failure and COPD – focus on early symptom identification and prompt response from the facility medical and nursing teams (including nursing assistants).
- Delirium protocol – early identification and response to a broad range of conditions, including infections and sepsis that can be life threatening.
- Antibiotic protocol – addresses the processes for consistent and complete monitoring of the patient and the antibiotic after discharge.
- Discharge protocol – based on the acute care coordination bundle, this protocol ensures that the handoffs at the time of nursing facility discharge insure safe transition of patients and families to the community and their primary care teams.

A nurse coordinator will be available to train facility staff in the implementation of these protocols. Within the facilities, the admitting nurse or the shift supervisor will identify patients at highest risk to ensure clinical and care coordination protocols are put in place. Care Coordinators within the nursing facilities would evaluate high-risk patients prior to discharge and set up home care services to safeguard the patient transition to the community. These Care Coordinators will be made available to skilled facilities serving patients discharged from partner hospitals.

Communication between acute and post-acute teams is central to successful transitions of patient from hospital to facility and facility to home. Critical components of the communication handoffs from hospital to facility, facility to ED/hospital, and ED to facility have been identified and will become the standards that will be implemented across facilities serving patients from partner hospitals.

TRIPLE AIM: Decrease in hospital utilization; improved health outcomes.

Intervention: Home Based Strategies

Home Health services as reimbursed by Medicare are a critical component of safe transitions in care. Acute transitions strategies that provide Transition Guides expand this safety net beyond those covered by Medicare, but this one strategy is not enough.

Remote Patient Monitoring is a strategy to provide daily nurse monitoring and immediate feedback to patients with heart failure, diabetes or COPD. A simple device placed in the home reminds patients to measure their weight, blood pressure, pulse oximetry, glucose and to take medications. A nurse monitors all these metrics via computer, interacts with the patient and even reaches out to physicians as needed in prompt response to metrics exceeding normal thresholds.

Patients going home on IV antibiotics may have the drug covered by Medicare but not the home nursing or care coordination needed for these sometimes complex therapies. These patients require close monitoring and care coordination to ensure they are receiving the right dose of medications, are actually taking their medications and have the necessary vascular access to ensure ongoing therapy. An OutPatient Antibiotic Therapy (OPAT) case manager will be deployed to provide care coordination for IV antibiotic patients both at home and in skilled facilities.

The MedStar Washington Hospital Center House Call Program identified an unmet need in this population – the availability of affordable in home personal care/home health aide services for the chronically ill and home bound. The Medicare home health benefit covers home health aides for only a short term while skilled services are needed in the home, not on a long term basis. The Community Health Partnership of Baltimore will establish funding for longer-term in home aide service to support those with complex needs and to provide support and respite to family caregivers in the home.

TRIPLE Aim: Decrease in hospital utilization; improved health outcomes; improved patient experience.

Infrastructure and Workforce

The Leadership Team of the Partnership will consist of a Director, Administrator, Case Manager and Behavioral Health Program Managers, Project Manager, Provider champions and a Financial Analyst. The leadership team will serve the Community Health Partnership of Baltimore and be responsible for coordinating the care of the high risk Medicare beneficiaries in the defined zip codes and for the successful attainment of milestones. Table 1 briefly describes their functions.

Table 1: Functions of the Partnership Leadership Team

Position	Description
Director	Oversees the Community Health Partnership of Baltimore
Administrator	Provides administrative support to the Director and the hospital partners
CM Program Manager	Provides CM leadership to the CMs in the Partnership. Identifies and spreads best practices. Works with analytics team on CQI
HBS Program Manager	Provides HBS leadership to the HBSs in the Partnership. Identifies and spreads best practices. Works with analytics team on CQI
Project Manager	Coordinates all the different parts of the Partnership, including the sharing of data/reports with the hospital partners
Provider Champions	Engage and align physicians in the work of the Partnership
Sr. Financial Analyst	Provides financial support for the Partnership and tracks expenses as

Position	Description
	well as prepares the necessary reports needed for the hospital partners and the HSCRC

The leadership team will serve the Partnership and be responsible for coordinating the care of the high risk Medicare beneficiaries in the defined zip codes. They will be responsible for the following:

- Deployment of the interventions
- Receiving referrals and identifying the appropriate Medicare beneficiaries for the appropriate interventions
- Designing performance metrics and monitoring the processes of the different interventions across the Partnership
- Provider engagement
- Reporting of outcomes to the hospital partners in the Partnership
- Communicating with the West Baltimore Collaborative (see Appendix H on the alignment with the West Baltimore Collaborative)

The leadership team will be hired by Johns Hopkins HealthCare who will serve as a Management Services Organization (MSO) for the Partnership. Under the MSO, the Director will report through a management committee which will be a subcommittee of the board. The responsibility of each hospital partner is further defined in the governance section.

Improving Population Health

The Community Partnership of Baltimore will use the public health and community health infrastructure developed through Maryland's State Health Improvement Process (SHIP) as the backbone to develop and implement our Plan for Improving Population Health. The interventions described in this implementation proposal align with the State Health Improvement Process framework for progress toward a healthier Maryland. Four of the five focus areas and the following measures will be addressed in the Partnership:

Table 2: Alignment of Partnership Focus Areas with Maryland's State Health Improvement Process

Focus Area	Measure Addressed
Healthy Living	Adults who have healthy weight
	Adults who smoke
	Life expectancy
Healthy communities	Fall related death rate
Access to health care	Persons with a usual source of health care
Quality preventive care	ED utilization for chronic diseases

In addition to clinical outcome measures, State and county level data on critical health measures provided through the SHIP will be tracked for Baltimore City as well as measures available in County Health Rankings.

The interventions and their respective measures also align with the following priority areas identified by the Baltimore City Health Department in *Healthy Baltimore 2015*:

1. Promote Access to Quality Health Care for All
2. Promote Heart Health
3. Recognize and Treat Mental Health Needs

4. Reduce Drug Use and Alcohol Abuse
5. Encourage Early Detection of Cancer
6. Create Health Promoting Neighborhoods

The local health improvement coalition (LHIC) for Baltimore City, once it is re-activated, will develop current strategies for the improvement of health in Baltimore City. Under the leadership of current health commissioner Dr. Leana Wen, the Baltimore City Local Health Improvement Coalition is undergoing a transformation. The LHIC's "re-invention" will be led by the new Chief of Policy and Engagement. In 2016, the LHIC redevelopment plan will be focused on convening key leaders from the hospitals, FQHCs and the community to identify and support city-wide strategies to improve population health which include improvements in access to behavioral health services, identification of high utilizers and appropriate, effective care management. These principles align with the interventions and goals identified in this Partnership. Active participation in the Baltimore City LHIC will ensure that our delivery model and interventions align with the priorities and actions of the LHIC. It will also ensure that we keep current on Baltimore City health issues, stay informed regarding efforts in progress across the city to improve health, and identify opportunities for new or enhanced partnerships.

The Baltimore City Hospitals Community Benefit Collaborative is another important forum that seeks to improve the health of the residents of Baltimore City. Representatives of the Community Benefits programs of most of the city hospitals meet once a month to discuss how the hospitals can work together to maximize the impact of our collective health improvement efforts. The group prioritizes social determinants of health, and for the coming year has committed to focus on health literacy. More specifically, they will focus on messages encouraging positive engagement with the health care system by establishing a relationship with a primary care provider. The goal is to help people understand how to use the health care system effectively, which will reduce ED and inpatient utilization. In addition, members of the Collaborative share information about their respective Community Health Needs Assessments and Implementation Plans, seeking opportunities to work together now and in the future to make the most efficient use of resources and ensure the most comprehensive results.

Alignment with the Hospital Strategic Transformation Plan

The Community Health Partnership of Baltimore aligns with each hospital partner's strategic plans in many ways:

- They all aim to deliver patient centered care
- They all describe care coordination for high utilizers across different care settings
- They all seek to strengthen primary care access and delivery
- They all seek to strengthen behavioral health care access and delivery
- They all are developing partnerships with community stakeholders and organizations

Each hospital has described a "bundle" of interventions designed to meet the needs of the patients they serve. Some of the interventions are more established and were developed with the previous enhancement to the hospital's rates and some of the interventions are new and part of the Partnership. Because each hospital only selected the interventions needed to fill a gap in their services, the bundle of services that the hospital partners can now provide complements other programs underway. Each hospital recognizes that targeting a single aspect of care delivery has limited impact on utilization but bundled interventions that promote coordinated care processes have significant impact on care delivery and quality outcomes. The Community Health Partnership of Baltimore builds on that by offering a suite of interventions that improves care coordination across the continuum. Additionally, education to providers on patient engagement enhances current strategies to increase active participation in

healthcare decisions including end of life planning. Lastly, collaborations with community providers helps to improves rates of patient engagement, improve access to primary care, improve opportunities for management of chronic diseases in the primary care setting and increase the focus on primary prevention opportunities.

3. Measurement and Outcome

Methodology

Choosing Medicare and dually eligible beneficiaries as the initial target population comes with many challenges in measurement. First, without claims data provided from the Center for Medicare and Medicaid Services, it is difficult to get a comprehensive view of the health of each individual in our target population. Obtaining Electronic Medical Record (EMR) data is also a challenge, as primary care practices across the city employ different EMR systems, and not all individuals in our target patients have a regular primary care doctor from whom they receive care. However, data obtained from BRG, allows us to profile our target population and begin to understand their utilization, cost, and conditions more specifically. It also provides us with some baseline utilization data for our target population.

In designing metrics that will be used to measure progress, we decided to focus on evidence-based measures that we can reliably report on, using existing data sources whenever possible. In addition, we recognized the value in aligning performance measures with existing initiatives such as the Maryland State Health Improvement Plan, Meaningful Use, Patient Centered Medical Home, the National Quality Forum, CMS Physician Quality Reporting System, Johns Hopkins Community Health Partnership (J-CHiP), and the Johns Hopkins Medicine Alliance for Patients (JMAP) ACO in order to reduce duplication of data collection and reporting efforts. Under the leadership of our Partnership, the measurement plan was shared with the West Baltimore Collaborative, and the partnerships mutually agreed that alignment across measures would be beneficial for working towards common city health goals, for simplifying documentation necessary from providers, and for maximizing our mutual understanding of how health outcomes change across Baltimore City as a result of the proposed interventions.

The measures chosen for the dashboard represent a high level view of how progress across the Partnership will be measured, based on the interventions that are deployed by all hospital partners. Metrics were chosen based on the following considerations:

- Availability of data
- Quality of data
- Feasibility of data collection
- Source of data
- Potential to inform quality improvement and demonstrative improvement
- Alignment with current reported performance metrics
- Alignment with the West Baltimore Collaborative

Additional measures will be incorporated into an internal monitoring plan that will provide information necessary to monitor implementation plans and to provide data for continuous quality improvement initiatives for the interventions described in this proposal. Further, the Johns Hopkins Medicine Ambulatory Quality and Transformation team will produce internal operational dashboards for quality improvement purposes on a routine basis. The team will work with the regional partners to collect data from multiple sources including: available administration claims, practice electronic medical records, patient experience surveys, and CRISP data.

The Continuous Quality Improvement (CQI) team will provide metric definitions and report specifications and assure practices' reports meet those definitions. They will also obtain reports with predefined measurement periods from the various sources/practices and collate reports into dashboards with entity, practice, and provider level performance. Additionally, the Quality Improvement Data Analyst will provide graphical and other visualizations of the data, including run charts. Performance dashboards and visualizations will be shared with key stakeholders and local quality improvement teams to communicate meaningful and timely information on performance indicators. They will also guide the performance and implementation strategies by identifying opportunities for improvement. We will also monitor interventions to evaluate what is working and make concurrent adjustments.

Measures

As shown in the dashboard in Appendix I, our measures fall into three main domains: process; quality; and utilization and costs. While each of these domains cover measures aimed at monitoring progress for the regional intervention as a whole, the process measures will be reported only for individuals in the target population, and the quality measures will only be gathered for individuals who have a PCP site which participates in reporting these measures to the collaborative. The process measures in the dashboard were chosen based on the interventions that will be deployed across all hospital partners, and are designed to measure care coordination, patient engagement, and how well the regional interventions described in the next section are achieving their goals for the target population. These measures will also be used to inform ongoing improvement efforts across the Partnership, and they include rates of PCP assignment for individuals who did not previously have a PCP, rates of care plan creation among the target population who have an assigned care manager, use of encounter notification alerts by members of the care team, and percent of the target population who are connected to needed interventions. For the full list of measures, please see the dashboard in Appendix I.

Quality measures are established ACO measures related to preventive care, such as control of hypertension and diabetes, immunization rates, and screening for clinical depression. Measures related to patient satisfaction also fall under the Quality section of our dashboard. Each of these quality metrics will be reported only for patients at ambulatory practices participating in the Partnership that are able to provide quality reports to the analytics team. Short term, the Partnership will use the Hospital Consumer Assessment of Healthcare Providers Survey (HCAHPS) measures to assess patient satisfaction at the hospital level, as these surveys are already being conducted. Longer term, the Partnership plans to use the Clinician and Group Consumer Assessment of Healthcare Providers Survey (CG CAHPS) to understand satisfaction in ambulatory care settings.

Utilization and cost measures include outcomes such as overall admission rates, rates of preventable admissions (using several of the prevalent conditions identified in our target population to understand potentially avoidable utilization), 30 day readmission rate, emergency department utilization rates, and hospital related costs per capita (see Appendix I for the full list of measures.) Overall, these measures were designed to align with the HSCRC suggested measures, the other quality and measurement initiatives already in place across the state, and with those used by the West Baltimore Collaborative. They will provide the Partnership with the information needed to monitor and evaluate ongoing interventions. In alignment with the HSCRC requests, data broken down by race and ethnicity will be provided when this information is available. Several measures suggested by the HSCRC are not yet possible to collect. For example, although we would like to monitor the total cost per capita for patients in the interventions, this will not be possible without Medicare claims data, and this is noted in the dashboard.

In light of the fact that the Partnership has not yet begun the implementation stage, there is no way to capture the Partnership's current performance on the stated metrics except for those cost and utilization measures that can be determined for our potential high risk population through existing data sources. Currently, based on BRG data, for Medicare beneficiaries in our target population, the average number of hospitalizations per person is 3.9, and the average number of ED visits is 0.9. Among the total number of Medicare hospitalizations in CY2014, 45% had a primary diagnosis that was considered chronic or potentially avoidable, and 9% were readmissions. For dually eligible patients in our target population, the average number of hospitalizations was 4.3. Of the total hospitalizations, 8% were readmissions and 52% of these had a primary diagnosis that was considered chronic or potentially avoidable. The average number of ED visits among individuals who were dually eligible was 2.4.The average charge per patient for Medicare was $67,900, and the average charge per patient among dually eligible patients was $71,900 (see Appendix A). Baseline metrics for process and quality measures will be measured going forward, but these data will not be available until the implementation phase. Once baseline measures are captured and more data is available on the target population, appropriate targets will be set for each measure. See Appendix J for a table of HSCRC zip code specific baseline data provided by BRG for the Partnership.

4. Return on Investment

The interventions proposed by the Partnership will help move the state towards the overall goals and requirements of the new All-Payer Model in Maryland by helping to reduce unnecessary hospitalizations in the target population. The expected ROI for years 2017, 2018 and 2019 are included below.

The Community Health Partnership of Baltimore	**CY 16**	**CY 17**	**CY 18**	**CY 19**
A. Number of Patients (all payer high utilizers)	1,574	2,361	3,148	**3,148**
B. Number of Medicare and Dual Eligible	856	1,284	1,712	**1,712**
C. Annual Intervention Cost/Patient	$7,611	$6,369	$4,776	$4,776
D. Annual Intervention Cost (B x C)	$11,980,150	$15,036,154	$15,036,154	$15,036,154
E. Annual Charges (Baseline)	$110,050,000	$165,075,000	$220,100,000	$220,100,000
F. Annual Gross Savings (XX% x E)	$5,502,500	$16,507,500	$33,015,000	$33,015,000
G. Variable Savings (F x 50%)	$2,751,250	$8,253,750	$16,507,500	$16,507,500
H. Annual Net Savings (G-D)	($9,228,900)	($6,782,404)	$1,471,346	$1,471,346
Return on Investment	**0.23**	**0.55**	**1.10**	**1.10**

The number of patients reached in the Partnership is based on reaching 50% of the 3,148 high utilizers defined in the catchment area in CY 16. In CY 17, the assumption is that 75% of the high utilizers will be engaged in an intervention and in CY18, 100% of the high utilizers will be engaged in an intervention. A savings of 5% in annual charges is expected in CY16 due to reductions in inpatient hospitalizations, including readmissions, decreases in lengths of stay and reductions in ED utilization. With ongoing efforts of the Partnership, savings are expected to increase to 10% in CY17 and 15% in CY18.

Though not reflected in the ROI calculations, changes in the delivery system including provider training and education on patient engagement, the development of a SNF collaborative and community engagement through our community partners are all expected to engage patients in their overall care and improve primary and secondary prevention efforts that could accelerate the expected savings

described so that they are realized sooner than 2018 and are potentially larger than the conservative estimate provided above.

As a positive ROI is realized, funds will be reinvested back into the interventions that show the most benefit. Payers will benefit through a lower total cost of care and a lower per capita cost for their patients. It will be important that these savings not only accrue to the payers but that they are passed along to the consumer through lower premiums and lower co-pays and deductibles.

5. Scalability and Sustainability

Scalability

All of the interventions in the Partnership are scalable. Decisions to expand to additional practices, expand teams or deploy interventions in new zip codes within the Partnership will be based on lessons learned. We will leverage the insights and experiences of our front-line staff in helping to identify systemic barriers system-level root causes and then feed this information to the leadership of the Partnership for action. Because the evaluation metrics may take several months to manifest, we will complement these longer-term metrics, with short-term metrics that will be monitored and fed back to participating primary care providers, ED's, and other community-based partners on a quarterly basis. This data will enable ongoing performance monitoring and rapid-cycle feedback that will enable learning and mid-course corrections, as necessary, to promote success.

Sustainability

Value must become the overarching goal of any health care system (Porter, 2010). Measuring value and improving value must become the driving force of the Partnership's transformation. Value in healthcare is defined as quality outcomes achieved per dollar spent, or expressed as Value=Quality/Cost. If the Partnership's interventions result in improvements in quality health outcomes and positive member experience while cost is held constant, we will have improved the value of healthcare to Medicare beneficiaries in Baltimore. The Community Health Partnership of Baltimore will integrate alternative funding through improved billing practices to ensure long-term sustainability of the interventions.

The Partnership will attempt to recover revenue by billing payers for appropriate services such as provider services in the bridge team and the house calls program, health education, behavioral health services, and care management services related to transitions of care. The uptake of the chronic care management code has been relatively low due to administrative barriers on the provider side and fiscal barriers on the patient side. During Q1, the Partnership will work with entities such as Med Chi to address some of those barriers and work to increase provider utilization and billing for the CCM code. In 2016, changes to the 2016 Medicare physician fee schedule will include two new advance care-planning codes. These codes can be used for a provider's time for discussing advanced directives and completing the necessary paperwork. Education on their use will be deployed in the Partnership. As additional services/codes become reimbursable from the payer(s), we will pursue them. We will continue efforts to advance meaningful and appropriate payment reform to create incentives for providing complementary social services to meet patients' needs. As we find sustainable reductions to hospital services under the GBR, a portion of those funds will be reinvested in the programs.

Over the longer term, it is unlikely that the funding of these interventions can remain solely the financial responsibility of the hospital secondary to potential changes in the hospital's rates. The hospitals will work with the HSCRC and the payer community to help with continued and expanded funding. It will also be important to assure that the savings achieved do not only benefit the payers but that the savings ultimately flow back to the patients.

6. Participating Partners and Decision-Making Process

The participants of the Community Health Partnership of Baltimore are listed in Appendix K. Letters of support from our community partners are provided in Appendix L.

Governance and Role of Each Partner

The hospital members of The Community Health Partnership of Baltimore (Johns Hopkins Hospital, Johns Hopkins Bayview Medical Center, Sinai Hospital, Mercy Medical Center, MedStar Franklin Square Hospital and MedStar Harbor Hospital) will jointly create a governance structure for this regional joint venture. A finalized governance structure will be described in a definitive agreement among the parties which will be signed by each hospital's President before the end of Q1, calendar year 2016. Each of the hospitals will participate in the governance of the venture and will appoint representatives to a board or operating committee to be formed once the definitive agreement is executed. The board or operating committee will review the previous year's performance, including finances, quality and strategic direction. The board or operating committee will also appoint a management company to manage the business and affairs of the venture and provide leadership, grant administration and central services. The structure of the venture and the management company's responsibilities for operations are shown in Appendix M.

The Board will appoint committees and each partner hospital will have role on these committees in addition to their role on the Board. The Committees of the Board will make recommendations to the board for approval. *The Finance Committee* will be chaired by the Board Treasurer and will be comprised of one appointee from each hospital and any recommendations brought to the board must be approved by a majority of the committee. *Finance Committee* responsibilities include monitoring and recommendations to the board related to financial and resource oversight, investments, budget and audit functions, financial viability of proposed interventions and sustainability post-implementation, funding opportunities and mechanisms, monitoring of contracts, insurance needs and policies.

The *Program Interventions Committee* will be chaired by a board director and hospitals will encourage participation on the committee by community partners. Any recommendation to be brought to the board must be approved by a majority vote of the committee. The responsibilities of the committee include Planning, implementation and monitoring of program's performance; monitoring key performance and outcome metrics as approved by the board, including population health data, access to care, and numbers served; monitoring continuous quality improvement initiatives; evaluating and recommending proposed projects, developing materials for board discussion (includes both new and ongoing projects) based on a cost-benefit analysis, evidence-based practice bases for recommendations whenever applicable, justifications for recommendations, etc. and ensures the board has the information they need to make an informed decision; Clinical intervention design, scope, staffing, resources required, workflows; Partnership member roles, responsibilities, performance expectations, reporting; definition and eligibility criteria for target patient population; new processes, workflows and tools; metrics/measures that will be used to monitor performance; methods for secure access to care plans across clinical teams; contingency and sustainability plans for the clinical initiative(s).

The Executive Committee will be chaired by a board director and its members will be appointed by the Partnership's board and will advise the Partnership's board of directors to support its decision-making processes. With regard to investment and strategic planning decisions, the Executive Committee may not take action itself, but rather reports on the results of research and makes recommendations. Any recommendation to be brought to the board must be approved by a majority vote of the committee.

The Executive Committee oversees voting rights among Partnership Members and defines quorum requirements. The committee may make recommendations for removal of a Partnership member or may also make recommendations about the addition of a member to the Partnership. The committee may also recommend to the board the formation of a partnership with a third party.

Describe Participation in Development of Interventions

From the beginning of the planning process, leaders from JHH, JHBMC, Mercy, Sinai, MedStar Franklin Square Hospital, and MedStar Harbor Hospital all participated in and contributed to the development of the proposed interventions. A steering committee and multiple subcommittees and workgroups (see Appendix A) were established to tap into the expertise of each respective institutions subject matter experts to propose evidence-based interventions for the Community Health Partnership of Baltimore.

Each hospital partner has agreed to pool its .25% to the Community Health Partnership of Baltimore (see Table 3). JHH and JHBMC will be adding an additional .25 to cover additional interventions not selected by the Hospital partners as Johns Hopkins will not be applying to HSCRC under a separate application like the other hospital partners. Table 4 provides an overview of the interventions being deployed and which hospitals in the Partnership are participating in.

Table 3: Pooled Funds for the Community Health Partnership of Baltimore

Hospital	0.25%	Additional 0.25%
Johns Hopkins Hospital (JHH)	$4 M	$4 M
Johns Hopkins Bayview Medical Center (JHBMC)	$1.4 M	$ 1.4 M
Mercy Medical Center	$1.3 M	-
Sinai Hospital	$1.8 M	-
MedStar Franklin Square Hospital (MSFS)	$1.1 M	-
MedStar Harbor Hospital (MSHH)	$0.5 M	-
TOTAL	$10.1 M	$5.4 M

Table 4: Hospital Participation in the Partnership Interventions

Intervention	JHH	JHBMC	Mercy	Sinai	MSFS	MSHH
Primary Care Team/care coordination	Yes	Yes	Yes	*	No	No
Bridge Team	Yes	Yes	Yes	Yes	Yes	Yes
House Calls	Yes	Yes	No	Yes	*	*
CHWs in the Community	Yes	Yes	No	*	Yes	Yes
Neighborhood Navigators	Yes	Yes	No	Yes	Yes	Yes
Patient Engagement Training	Yes	Yes	Yes	Yes	Yes	Yes
ED Coordination with CHWs	Yes	Yes	Yes	*	Yes	Yes
Convalescent Care	Yes	Yes	Yes	Yes	Yes	Yes
SNF Collaborative	Yes	Yes	Yes	*	Yes	Yes
SNF Protocols	Yes	Yes	No	No	No	No
Home Based Strategies	Yes	Yes	No	No	No	No

* Denotes the hospital has/is requesting a similar program funded outside of this proposal.
Green denotes interventions that are shovel-ready for immediate implementation. Yellow denotes interventions that will be deployed within months after funding is received.

7. **Implementation Work Plan**: **INTERVENTIONS and TIMELINES**

The proposed timelines and milestones are based on a funding start date of February 1st, 2016.

1. Leadership

The Leadership Team of the Community Health Partnership of Baltimore will consist of a Director, Administrator, Case Manager and Behavioral Health Program Managers, Project Manager, Provider champions and a Financial Analyst. The leadership team will serve the Community Health Partnership of Baltimore and be responsible for coordinating the care of the high risk Medicare beneficiaries in the defined zip codes and for the successful attainment of milestones below:

	Year 1: Q1	**Year 1: Q2**	**Year 1: Q3**	**Year 1: Q4**
Milestone	-Post and hire for leadership team positions. -Deploy interventions scheduled for Q1. - Develop materials for ongoing HR training and development. -Develop process for receiving referrals and identifying the appropriate Medicare beneficiaries for the appropriate interventions. - Determine billing processes for services. -Design performance metrics and monitor the processes of the different interventions across the Partnership. -Provider champions will work with PCP practices to engage physicians. -Communicate with and coordinate care with the West Baltimore Collaborative. - Schedule Board and Executive Committee meetings.	-Hire for leadership team positions - Deploy interventions scheduled for Q2. - Implement ongoing HR training and development.	- Deploy interventions scheduled for Q3. -CQI for those interventions deployed in Q1-2. - Report process measures to the hospital partners in the Partnership. - Implement ongoing HR training and development.	-CQI for those interventions deployed in Q2 and Q3. - Report process measures to the hospital partners. - Implement ongoing HR training and development.
Targeted Population	Medicare beneficiaries in the defined zip codes for the Partnership: 21202, 21205, 21206, 21209, 21211, 21213-19, 21222-25, 21230, 21231, and 21237 which represent			

	Year 1: Q1	Year 1: Q2	Year 1: Q3	Year 1: Q4
	the combined community benefit service areas (CBSAs) of the partner hospitals			

2. Operations

We will establish a continuous quality improvement (CQI) team based on the analytics received in the Partnership. The CQI is part of the rapid cycle learning that will be needed to modify interventions as needed based on lessons learned as well as spread best practices to other sites. This will help determine which interventions should be taken to scale or potentially terminated if not improving health outcomes or reducing costs. At the end of year 1, we will also evaluate the work done to date so that an ROI can be determined and reported to HSCRC. For IT, our Partnership plan is to promote the use of CRISP as base platform. CRISP is developing a patient 'care profile', which will act as a landing page for patient's clinical information. Each hospital in the Partnership will develop or enhance the needed data elements in their EHRs and establish a transmission connection to CRISP.

	Year 1: Q1	Year 1: Q2	Year 1: Q3	Year 1: Q4
Milestones	***CQI*** -with the leadership develop the metrics needed for CQI -with the analytics team identify the data needed for CQI -develop dashboards for reporting to the leadership team and the board	***CQI*** -present the dashboards to the leadership team and board for approval -begin populating the dashboards	***CQI*** -continuous quality improvement	***CQI*** -continuous quality improvement
	Analytics -with the leadership team identify the data needed for CQI and outcome measures for evaluation -implement the appropriate BAA's for data sharing across the Partnership -Develop reports needed for the leadership team and the board	***Analytics*** -BAA's are signed by all partners -data is provided from all partners -develop quarterly reports for the leadership team and the board	***Analytics*** -data is provided from all partners -develop quarterly reports for the leadership team and the board	***Analytics*** -data is provided from all partners -develop quarterly reports for the leadership team and the board
	Intervention Monitoring -with the leadership team, the evaluation	***Intervention Monitoring*** -collect measures	***Intervention Monitoring*** -collect measures	***Intervention Monitoring*** -collect measures

	Year 1: Q1	Year 1: Q2	Year 1: Q3	Year 1: Q4
	team and the analytics team identify the metrics needed to determine an ROI			
	IT -work with CRISP and each hospital partners EHR so that the care coordination field can be transmitted to the care alert field on the Care Profile view -work with CRISP to create a standard title to identify which documents are care plans -work with CRISP to create care alerts	***IT*** -continue work with CRISP -care alerts created and provided to hospital partners through ENS -care profiles available to hospital partners	***IT*** -care alerts created and provided to hospital partners through ENS -care profiles available to hospital partners	***IT*** -care alerts created and provided to hospital partners through ENS -care profiles available to hospital partners
Targeted Population	High risk/High need Medicare beneficiaries in need of coordinated care			

3. <u>Embedded Teams in Primary Care*</u>

We will deploy staff to appropriate existing and new practice sites and coordinate with practice site leaders to embed case managers (CM) and health behavior specialists (HBS) to establish Community Health Care teams at the practice sites. High risk/high need individuals in the target population with established linkages with primary care will work with their embedded Community Health Care Teams to meet their needs and coordinate their care.

	Year 1: Q1	Year 1: Q2	Year 1: Q3	Year 1: Q4
Milestones	-Orient and train existing staff on new processes and measures. - Embed CM/HBS at practice sites at JHCP and Mercy ambulatory practices. -Provider champions will work with PCP practices to engage physicians.	-Provider champions will work with PCP practices to engage physicians. -Coordinate with CHW on barriers to care. -Reconfigure team huddles at the practice sites. -Report defined metrics.	-Provider champions will work with PCP practices to engage physicians. -Coordinate with CHW on barriers to care. -Continue team huddles at the practice sites.	-Provider champions will work with PCP practices to engage physicians. -Coordinate with CHW on barriers to care. -Continue team huddles at the practice sites.

	-Coordinate communication and warm handoffs at transition points across the continuum. -Develop workflow processes for coordination with CHW. -Develop metrics for patient outcomes related to CM/HBS team interventions.		-Report defined metrics.	-Report defined metrics.
Targeted Population	High risk/High need Medicare beneficiaries in need of coordinated care			

****Note: Sinai and MedStar will also work with CM at their practice sites but will be outside of this funding proposal.***

4. <u>CHW's in the Community/Emergency Department (ED)*</u>

Expand Community Health Workers (CHW) in the community and in the Emergency Departments (EDs). In this Partnership, we will continue the relationship with Sisters Together and Reaching to expand the community-based CHW model. We will also deploy CHWs to the EDs in order to help address the patient's social determinants of health barriers and connect them to their patient-centered medical home. The deployment of CHWs in the ED grew out of our experience in J-CHiP. Specific feedback from colleagues working in the ED has suggested that this intervention closely aligns with the existing CHW intervention to ease transitions and take advantage of the knowledge and experience of our community partners.

	Year 1: Q1	**Year 1: Q2**	**Year 1: Q3**	**Year 1: Q4**
Milestones	-Deploy CHW in high need zip codes around JHH, Bayview, and Med Star Harbor and Franklin Square. -Connect CHW with practice sites and ED's. -Develop workflow processes for coordination and communication to medical team/ED. -Develop metrics for patient outcomes related to CHW.	- Launch case management platform with CBOs and data sharing integration with CRISP. - Deploy CHW in high need zip codes. -Engage with embedded Community Health Care Teams. -Integrate with the Bridge team. -Engage with ED. -Report defined metrics.	- Engage with embedded Community Health Care Teams. -Engage with EDs. -Report defined metrics.	-Engage with embedded Community Health Care Teams. -Engage with ED. -Report defined metrics.
Targeted	High risk/High need Medicare beneficiaries with social needs that are creating barriers			

	Year 1: Q1	Year 1: Q2	Year 1: Q3	Year 1: Q4
Population	to care			

Note: Sinai will also deploy CHWs in the community and in their ED but funding will be outside of this proposal.

5. Bridge Team(s)

This Bridge Team model is based on an Assertive ACT staffing model with modifications made for the short duration of services (30 days on average with flexibility up to 60 days) to be delivered. The team will consist of a Case Manager, Health Behavioral Specialist, Psychiatrist, Physician Addiction Specialist, Medical Consultant and Peer Support Specialists and will be deployed in a central location(s) in our Partnership. The goal of the bridge team will be to engage, manage, and coordinate the short-term health needs of Medicare high utilizers across the region that are not currently connected to primary care and/or who have urgent/prominent behavioral health conditions and substance use disorders.

	Year 1: Q1	Year 1: Q2	Year 1: Q3	Year 1: Q4
Milestones	-Leadership will post and hire for team positions. -Identify space for team. -Educate Hospitals, ERs and primary care in the Partnership of Bridge team. -Develop links for bridge team with Behavioral Health System Baltimore (BHSB). -Develop workflow processes for engagement, communication, data collection. - Develop metrics for patient outcomes related to bridge team.	-Hire team positions and deploy. -Triage and manage referrals from Hospital, ED, primary care. -Report defined metrics.	-Deploy the 2nd team. - Triage and manage referrals from Hospital, ED, primary care. -Report defined metrics.	-Triage and manage referrals from Hospital, ED, primary care -Report defined metrics.
Targeted Population	High risk/High need Medicare beneficiaries with urgent behavioral health conditions and substance abuse challenges			

6. Convalescent Care

The Convalescent Care Program (CCP) is operated by Health Care for the Homeless (HCH) to provide people experiencing homelessness who are discharged from the hospital a place to stay, rest, and recuperate from an acute illness or surgery. CCP is a 25-bed unit staffed by HCH nurses, medical

providers and social workers. Patients receive 12 hour a day nursing services such as medication education, care coordination and wound care. Patients receive social work services to link them to housing, income, mental health and addiction services. While at CCP, patients are assessed by an HCH medical provider and are provided routine health screenings and linkage to primary care.

	Year 1: Q1	**Year 1: Q2**	**Year 1: Q3**	**Year 1: Q4**
Milestones	-Post and hire for positions needed to expand current capacity. -Develop workflows and processes for engagement, communication, data collection.	-Expand bed capacity for CCP. -Develop workflows and processes for care coordination from CCP back to primary care (if not HCH).	-Report outcomes.	-Report outcomes.
Targeted Population	High risk/High need Medicare beneficiaries experiencing homelessness who are discharged from the hospital who need a place to stay, rest, and recuperate from an acute illness or surgery			

7. Patient Engagement Team

Health challenges facing our health system are related to chronic health conditions that require health behavior change. Since patient engagement is critical to success, we developed the Patient Engagement Training (PET) initiative for J-CHiP and JMAP which trains providers and staff on the tactics and skills needed to facilitate patient engagement, effect health behavior change and promote patient satisfaction. The work started in J-CHiP and JMAP will be expanded to include the other participants of our Partnership. This includes training staff and physicians utilizing a number of formats, including skill building and maintenance and learner evaluation.

	Year 1: Q1	**Year 1: Q2**	**Year 1: Q3**	**Year 1: Q4**
Milestones	-Identify providers and staff within practice sites in need of PET. -Deploy PET to staff. -Develop and implement process measures for training. -Develop evaluation plan for PET and skill maintenance.	-Identify providers and staff within practice sites in need of PET. -Deploy PET to staff. - Begin skill maintenance for trained staff. -Report defined metrics.	-Identify providers and staff within practice sites in need of PET. -Deploy PET to staff & providers. - Continue skill maintenance for trained staff and providers. -Report defined metrics.	-Identify providers and staff within practice sites in need of PET. -Deploy PET to staff & providers. - Continue skill maintenance for trained staff and providers. -Report defined metrics.
Targeted Population	Providers and staff in primary care offices in the Partnership in need of formal training on the tactics and skills needed to facilitate patient engagement and health behavior			

	change

8. House Calls*

The Home-Based Primary Care (HBPC) Program would function as a community-based program that provides home-based medical care, care management, caregiver support, counseling, and acute inpatient continuity to high-need, high-cost home-bound individuals on a longitudinal basis. The HBPC program is built around an interdisciplinary care team consisting of physicians, nurses, mid-level practitioners, social workers, and other health care professionals that coordinates social and medical services to help patients manage severe chronic illnesses and disabilities. *Note: As of the writing of this grant, the Geriatrician leading our house calls program resigned. The program will need to be rebuilt with the hiring of a new geriatrician.*

	Year 1: Q1	**Year 1: Q2**	**Year 1: Q3**	**Year 1: Q4**
Milestones	-Post and hire for Geriatrician and other team members. -Identify space for team.	-Hire Geriatrician and other team members. -Credential and privilege. -Collaborate with hospitals in the Partnership on the House Calls Program. -Develop metrics for patient outcomes related to house calls. -Develop processes for engagement, communication, data collection.	-Re-deploy the House Calls Program. -Accept referrals from hospitals in the Partnership. -Report defined metrics.	-Accept referrals from hospitals in the Partnership. -Report defined metrics.
Targeted Population	High risk/High need Medicare beneficiaries who are home-bound and in need of primary care			

****Note: MedStar operates a House calls program that is funded outside of this proposal.***

9. SNF Collaborative

Under the Community Health Partnership of Baltimore, we will scale and spread the Post-Acute Preferred Provider Network initiated by LifeBridge Health to Skilled Nursing Facilities utilized by the regional partner hospitals to create a SNF Preferred Provider Network. Participation in the Network would be based on quality and process criteria that capitalizes on best-practices for handoffs, reduces variation in care management and fosters care coordination across the continuum of care.

	Year 1: Q1	**Year 1: Q2**	**Year 1: Q3**	**Year 1: Q4**
Milestones	-Develop criteria for participation in the collaborative. -Develop a process for membership	-Enroll SNF's into the collaborative -Ongoing evaluation of the SNF's in the collaborative	-Enroll SNF's into the collaborative -Ongoing evaluation of	-Enroll SNF's into the collaborative -Ongoing evaluation of the SNF's in the

	Year 1: Q1	Year 1: Q2	Year 1: Q3	Year 1: Q4
	participation in the collaborative. -Develop a membership application. -Enroll SNF's into the collaborative. -Standardize contacts and communication within the collaborative. -Standardize discharge protocols. -Evaluate SNF's in the collaborative.		the SNF's in the collaborative	collaborative
Targeted Population	SNF providers within the Partnership			
Funding CY16	Hospital Infrastructure funds			

****Note: Sinai operates a SNF Collaborative program that is funded outside of this proposal.***

10. <u>SNF Protocols</u>

The top diagnoses for patients with high readmission rates from the SNF were: Heart Failure, COPD, Sepsis and other infections, end of life and behavioral health problems. Based on that, the following protocols will be implemented in the skilled nursing facilities serving discharges from partner hospitals:

- Heart failure and COPD – focus on early symptom identification and prompt response from the facility medical and nursing teams
- Delirium protocol – early identification and response
- Antibiotic protocol – consistent and complete monitoring of the patient and the antibiotic after discharge.
- Discharge protocol – this protocol ensures that the handoffs at the time of nursing facility discharge insure safe transition of patients and families to the community and their primary care teams.

A nurse coordinator will be available to train facility staff in the implementation of these protocols.

	Year 1: Q1	Year 1: Q2	Year 1: Q3	Year 1: Q4
Milestones	-Gap analysis to understand Partner/SNF protocols in place -identify partner SNF facilities in need of training -Establish training	-SNF training -collect process measures and report to analytics team -collect outcome measures and report to analytics team	-SNF training -collect process measures and report to analytics team -collect outcome measures and	-SNF training -collect process measures and report to analytics team -collect outcome measures and report to

	sites and schedule trainings -Develop and implement process measures for training. -Develop and implement outcome measures -Develop evaluation plan for SNF protocol maintenance.		report to analytics team	analytics team
Targeted Population	SNF providers within the Partnership			

11. Home Based Strategies*

Remote Patient Monitoring is a strategy to provide daily nurse monitoring and immediate feedback to patients with heart failure, diabetes or COPD. A simple device placed in the home allows a provider to monitor patients daily and provide immediate feedback to those individuals with heart failure, diabetes, or COPD. A nurse monitors all these metrics via computer, interacts with the patient and reaches out to physicians as needed in response to metrics exceeding normal thresholds. The Partnership will also deploy home health aide services to support home-bound patients with complex needs and to provide support and respite to family caregivers in the home.

	Year 1: Q1	**Year 1: Q2**	**Year 1: Q3**	**Year 1: Q4**
Milestones	-Post and hire additional nursing staff and home health aides to expand the program. -Orient and train new hires. -Develop standard protocols for communication and handoffs to PCP. -Develop process and outcome measures.	-Expand remote home monitoring. - Report defined metrics.	- Report defined metrics.	- Report defined metrics.
Targeted Population	High risk/High need Medicare beneficiaries who can be monitored in the home without the need for an extended hospital stay or skilled nursing facility			

****Note: Sinai, Mercy, and MedStar operate remote patient monitoring programs but funding will be outside of this proposal.***

12. Neighborhood Navigators*

Neighborhood Navigators (NNs) currently reside in specific East Baltimore neighborhoods – Middle East, McElderry Park, Madison/East End, Broadway East, Berea – and provide services on blocks near where they live. We will continue to build capacity of the Men and Families Center (MFC) and extend the work

of the Neighborhood Navigators to other high risk zip codes the Community Health Partnership of Baltimore catchment area. The NN model draws on geographically- and census-based approaches to community health delivery in resource-poor settings and on histories of community organizing in East Baltimore, with special focus on the long-term experience in this capacity of Neighborhood Navigator Program Director Leon Purnell. The NN model combines features of community health worker and peer advocate/mentor models.

	Year 1: Q1	**Year 1: Q2**	**Year 1: Q3**	**Year 1: Q4**
Milestones	-Refine and review process and outcome measures for NN. -Identify other CBO's that can work with and learn from MFC. -Identify and train NN in the new community. -Identify partner primary care sites to which NN can refer.	-Deploy NN in one other zip code in the Partnership. - Launch documentation platform for NNs and data sharing integration with CRISP. -Report defined metrics.	-Report defined metrics.	-Report defined metrics.
Targeted Population	High risk, high need communities surrounding the hospitals in the Partnership			

****Note: Mercy has its own community partnerships outside of this funding proposal.***

8. <u>Budget and Expenditures Narrative</u>

Hospital/Applicant:	The Johns Hopkins Hospital
Number of Interventions:	11
Total budget requested for CY16:	$12,334,379
CY17 Budget without offsets:	$15,500,000

<u>Personnel</u>

Total: $ 1,490,977 % Total Budget: 12.1% <u>Period of Performance (PP):</u> Feb 1 – Dec 31, 2016
<u>Scope of Work:</u> HSCRC Transformation Implementation dollars will fund the following workforce to implement the proposed interventions in the Community Partnership of Baltimore.

Leadership- Position and Activities	**Months**	**Amount Requested in PP**
Director	11	$145,200
Administrator	11	$96,800
CM Program Manager	11	$108,900
HBS Program Manager	11	$108,900
Project Manager	11	$84,700
Administrative Assistant	11	$31,460
Senior Financial Analyst	11	$21,175
Provider Champions (2 FTE)	11	$471,900

Analytics Position and Activities	Months	Amount Requested in PP
Lead Data Analytics	11	$89,147
Data Analyst	11	$82,770
Population Health Associate	11	$41,905
Reports Coordinator	11	$36,300

CQI Positions and Activities	Months	Amount Requested in PP
Quality Improvement Analyst (RN)	11	$96,800
Performance Improvement Data Analyst	11	$27,830
Provider Time (0.2 FTE)	11	$47,190

Information Technology

Total: $395,670 % Total Budget: 3.2% Period of Performance (PP): Feb 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will fund the configuration for EHR's to develop or enhance the needed data elements and establish a transmission connection to CRISP, interoperability across systems, and data storage.

IT Positions and Activities	Months	Amount Requested in PP
Clinical Informatics Specialist (0.3 FTE)	11	$32,670
Consultant for EPIC configuration at Johns Hopkins	11	$96,000
Consultant for EMR configuration at Mercy	11	$55,000
Consultant for EPIC configuration at Sinai	11	$96,000
EHR Interoperability	11	$36,000
Data Warehouse	11	$80,000

Primary Care Teams/Care Coordination

Total: $2,748,920 % Total Budget: 22.3% Period of Performance (PP): Feb 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will fund the deployment of staff to appropriate existing and new practice sites and coordinate with practice site leaders to embed case managers (CM) and health behavior specialists (HBS) to establish Community Health Care teams at the practice sites.

Embedded Primary Care Activities	Months	Amount Requested in PP
Salaries (31 FTE)	11	$2,601,500
Office equipment (computer, phone, etc.)	11	$90,420
Space	11	$16,500
Parking/travel	11	40,500

Bridge Team

Total: $901,203 % Total Budget: 7.3% Period of Performance (PP): June 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will fund the Bridge Teams which is a multidisciplinary model based on an Assertive ACT staffing model. The team will work to engage, manage, and coordinate the short-term health needs of Medicare high utilizers who have urgent/prominent behavioral health conditions.

Bridge Team- Activities	Months	Amount Requested
Salaries (14.1 FTE)	7	$761,947
Office equipment (computer, phone, etc.)	7	$47,746
Parking/travel	7	$26,300
Miscellaneous (supplies, CM system licenses, space)	7	$65210

House Calls Program

Total: $606,820 **% Total Budget: 4.9%** Period of Performance (PP): July 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will be used to fund home-based medical care, care management, caregiver support, counseling, and acute inpatient continuity to high-need, high-cost home-bound individuals on a longitudinal basis.

House Calls- Position and Activities	Months	Amount Requested in PP
Salaries (10.3 FTE)	6	$591,666
Office equipment	6	$1,894
Parking/travel	6	$6,000
Operational costs (medical & non-medical supplies, pharmacy)	6	$7,260

CHWs in the Community

Total: $1,850,771 **% Total Budget: 15%** Period of Performance (PP): April 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will be used to fund the expansion of the Community Health Workers (CHW) in the community.

Community Health Worker Program	Months	Amount Requested in PP
Salaries (34 FTE)	9	$1,319,136
Office equipment (computer, phone, iPads, etc.)	9	$69,465
Travel	9	$22,275
Operational costs (support staff, CM technology, uniforms, space, insurance)	9	$439,895

Neighborhood Navigator (NN) Program

Total: $805,522 **% Total Budget: 6.5%** Period of Performance (PP): April 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will fund the NNs who provide services on blocks in specific East Baltimore neighborhoods. The work of the NNs will be expanded to other high risk zip codes in the Community Health Partnership of Baltimore catchment area.

Neighborhood Navigator Program	Months	Amount Requested in PP
Salaries (10.3 FTE)	9	$429,997
NN stipends (90 volunteers)	9	$243,000
Office equipment (phones, etc.)	9	$53,460
Operational Costs (uniforms, supplies, space, documentation system, payroll processing	9	$79,065

Patient Engagement Training (PET)

Total: $91,580 **% Total Budget: 0.7%** Period of Performance (PP): March 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will fund the Patient Engagement Training (PET) initiative to train providers and staff on the tactics and skills needed to facilitate patient engagement, effect health behavior change and promote patient satisfaction.

Patient Engagement- Position and Activities	Months	Amount Requested in PP
Salary (.7 FTE)	6	$41,580
Training costs (CMSs, materials, food, etc.)	6	$50,000

Emergency Department (ED) Coordination

Total: $422,825 % Total Budget: 3.4% Period of Performance (PP): July 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will be used to fund the expansion of the Community Health Workers (CHWs) in the Emergency Departments (EDs) across the partner hospitals.

Patient Engagement- Position and Activities	Months	Amount Requested in PP
Salary (11.5 FTE)	9	$397,875
Office equipment (iPads, data plans, cell phones, etc.)	9	$16,450
Parking/travel	9	$5,400
Miscellaneous (badges, uniforms, supplies, etc.)	9	$3,100

Convalescent Care Program

Total: $374,568 % Total Budget: 3% Period of Performance (PP): Feb 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will be used to fund the expansion of the convalescent care program at Health Care for the Homeless to provide people experiencing homelessness who are discharged from the hospital a place to stay, rest, and recuperate.

CCP	Months	Amount Requested in PP
Salaries (4.4 FTE)	11	$326,517
Transportation/travel	11	$2,000
Operational costs (medical supplies, staff development & training, client activities, etc.)	11	$46,051

Skilled Nursing Facility (SNF) Protocols

Total: $131,050 % Total Budget: 1.1% Period of Performance (PP): Feb 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will fund the development and education of protocols in SNF for: Heart failure, COPD, Delirium, Antibiotic and standardization of discharges.

SNF Protocols- Position and Activities	Months	Amount Requested in PP
Salaries (1.1 FTE)	11	$127,050
Travel and Supplies	11	$10,000

Home Based Strategies

Total: $953,942 % Total Budget: 7.7% Period of Performance (PP): March 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will fund strategies for high-risk home bound Medicare patients including an Outpatient Antibiotic Therapy Case Manager, Home Health Aides, and remote patient monitoring.

	Months	Amount Requested in PP
Salaries (12 FTE)	10	$707,600
Office equipment (computer, cell phone, etc.)	10	$9,342
Transportation/travel	10	$12,000
Remote patient monitoring technology	10	$225,000

Intervention Monitoring

Total: $519,164 % Total Budget: 4.2% Period of Performance (PP): Feb 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will fund self-monitoring and cost savings analyses across the program to evaluate what is working and make concurrent adjustments.

Self-Monitoring	Months	Amount Requested in PP
Salaries (6.4 FTE)	11	$517,421
Miscellaneous Supplies	11	$1,743

Other Indirect Program Support

Total: $1,041,367 % Total Budget: 8.4% Period of Performance (PP): Feb 1 – Dec 31, 2016

Scope of Work: HSCRC Transformation Implementation dollars will fund indirect costs in support of the Leadership team, clinical interventions, and other critical functions across the Partnership.

Other Indirect Program Support	Months	Amount Requested in PP
Salaries (0.5 FTE)	11	$41,140
Equipment and supplies (computers, phones, supplies, communications materials)	11	$38,384
Analytics support (licenses, survey costs, etc.)	11	$8,776
CQI support (licenses, supplies, etc.)	11	$21,553
Consultant for community-based organizations	11	$82,500
Clinical Operations	11	
Salaries (5 FTE)		$371,030
Equipment and supplies (cell phone, computers)		$16,284
Parking and travel		$2,700
Patient engagement & self-monitoring support		$150,000
Tablet education & monitoring		$100,000
Patient support programs (ID cards, transportation, cell phones, pill boxes, resources, etc.)		$189,000
Training	11	$20,000

9. Summary of Proposal

Hospital/Applicant:	The Johns Hopkins Hospital
Date of Submission:	December 21, 2015
Health System Affiliation:	Johns Hopkins (JHH, JHBMC), Mercy Medical Center, Lifebridge (Sinai), MedStar (Harbor and Franklin Square)
Number of Interventions:	11
Total budget requested for CY16:	$12,334,379
CY17 Budget without offsets:	$15,500,000

Target Patient Population (300 word limit)

The target population of the Community Health Partnership of Baltimore (the Partnership) is Medicare high utilizers. In alignment with the HSCRC and the West Baltimore Collaborative, high utilizers are individuals who experienced three or more hospitalizations in the past year.

Geographically, the target population resides in the following 19 zip codes: 21202, 21205, 21206, 21209, 21211, 21213-19, 21222-25, 21230, 21231, and 21237 which represent the combined community benefit service areas (CBSAs) of the partner hospitals. The Partnership worked with the Berkley Research Group (BRG) to further define the target population.

BRG limited the target population to high utilizers (3 or more admissions in FY2015) who lived in the 19 zip codes, who were over age 18, and who had touched one of the partner hospitals in this time period and who have specific chronic and potentially avoidable conditions, including mental health and substance abuse. Using these criteria, BRG found that there were 3,148 unique high utilizers (all payers) who had a total of 11,247 inpatient visits in FY2015. Among these high utilizers, 904 were Medicare beneficiaries and 808 were dually eligible for Medicare and Medicaid. Looking at the inpatient utilization specific to this population, almost 30% of utilization is associated with conditions that are potentially avoidable. Therefore, our initial target population is the 1,712 patients in the combined Medicare and dually eligible population.

The top conditions among the target population identified by BRG were heart failure, sepsis and disseminated infections, renal failure, chronic obstructive pulmonary disease, diabetes, hypertension, obesity, pneumonia and hepatitis. Mental health and substance abuse conditions were also highly prevalent: 61% (547) of Medicare patients and 78% (627) of dually eligible patients had a mental health or substance abuse condition. Total charges for the combined Medicare and dually eligible population in FY2015 were $119,400,000.

Summary of program or model for each program intervention to be implemented. Include start data, and workforce and infrastructure needs. (300 word limit)

Partnership across city hospitals to address regional health offers a new perspective and new opportunities to come together to address health determinants. By partnering across hospitals, primary care practices, community organizations, and skilled nursing facilities, this regional partnership hopes to begin changing the drivers of health in Baltimore City that have led to high utilization and poor health outcomes to a long term financially sustainable model with improved health outcomes.

In designing interventions, the partnership's initial focus was to address current gaps in the regional system's ability to coordinate care for the target population. The strategies identified below, incorporated coordination across the different settings to ensure patients are moving across the settings and receiving care in settings that are the most appropriate.

Intervention	Start Date	Workforce and Infrastructure Needs
Community Health Care Teams	Operational	In place
Bridge Team	Y1, Q2	• Psychiatrist, physician addictions specialist, medical consultant, peer support specialists, Health Behavior Specialist, Health Behavior Specialist team leader, community health workers, nurse (some may be re-deployed from other programs)

		• Space—identified with Catholic Charities, MOU in process
House Calls	Y1, Q3	• Geriatrician and other team members (some to be redeployed) • Space
Community-based CHWs	Operational	• Expand CHW team • Case management IT platform that allows sharing of data with CBOs (system identified, to be deployed)
Neighborhood Navigators	Operational	In place. Additional CBO will be identified Y1, Q2 to host the intervention in another location in the city.
Patient Engagement Training	Operational	Team in place and has capacity.
CHWs in the ED	Y1, Q2	Hire additional community-based CHWs and deploy in the ED.
Convalescent Care	Operational	Intervention is in operation; funds will allow hiring of staff to create additional capacity.
SNF Collaborative	Y1, Q2	None
SNF Protocols	Ready to be deployed	None
Home-based Strategies	Ready to be deployed	None

Measurement and Outcomes Goals (300 word limit)

In designing metrics that will be used to measure progress, we focused on evidence-based measures that we can reliably report on, using existing data sources whenever possible. We recognize the value of aligning performance measures with existing initiatives such as the Maryland State Health Improvement Plan, Meaningful Use, Patient Centered Medical Home, the National Quality Forum, CMS Physician Quality Reporting System, Johns Hopkins Community Health Partnership (J-CHiP), and the Johns Hopkins Medicine Alliance for Patients (JMAP) ACO in order to reduce duplication of data collection and reporting efforts. Our measurement plan was shared with the West Baltimore Collaborative, and the partnerships mutually agreed that alignment across measures would be beneficial for working towards common city health goals, for simplifying documentation necessary from providers, and for maximizing our mutual understanding of how health outcomes change across Baltimore City as a result of the proposed interventions.

The measures chosen for the dashboard represent a high level view of how progress across the Partnership will be measured, based on the interventions that are deployed by all hospital partners. The measures fall into three main domains: process, quality, and utilization and costs. Metrics were chosen based on the following considerations:

- Availability of data
- Quality of data
- Feasibility of data collection
- Source of data
- Potential to inform quality improvement and demonstrative improvement
- Alignment with current reported performance metrics
- Alignment with the West Baltimore Collaborative

Additional measures will be incorporated into an internal monitoring plan that will provide information necessary to monitor implementation plans and to provide data for continuous quality improvement initiatives for the interventions described in this proposal.

Return on Investment. Total Cost of Care Savings (300 word limit)

The number of patients reached in the Partnership is based on reaching 50% of the 3,148 high utilizers defined in the catchment area in CY 16. In CY 17, the assumption is that 75% of the high utilizers will be engaged in an intervention and in CY18, 100% of the high utilizers will be engaged in an intervention. A savings of 5% in annual charges is expected in CY16 due to reductions in inpatient hospitalizations, including readmissions, decreases in lengths of stay and reductions in ED utilization. With ongoing efforts of the Partnership, savings are expected to increase to 10% in CY17 and 15% in CY18.

Annual Net Savings	($9,228,900)	($6,782,404)	$1,471,346	$1,471,346
Return on Investment	0.23	0.55	1.10	1.10

Though not reflected in the ROI calculations, changes in the delivery system including provider training and education on patient engagement, the development of a SNF collaborative and community engagement through our partners are all expected to engage patients in their overall care and improve prevention efforts that could accelerate the expected savings described so that they are realized sooner than 2018 and are potentially larger than the conservative estimate provided above. As a positive ROI is realized funds will be reinvested back into the interventions that show the most benefit.

Scalability and Sustainability Plan (300 word limit)

Scalability

All of the interventions in the Partnership are scalable. Decisions to expand to additional practices, expand teams or deploy interventions in new zip codes within the Partnership will be based on lessons learned. Because the evaluation metrics may take several months to manifest, we will complement these longer-term metrics with short-term metrics. This data will enable ongoing performance monitoring and rapid-cycle feedback and allow for expansion of successful interventions more quickly.

Sustainability

Measuring and improving value is the driving force of the Partnership.. Value in healthcare is defined as quality outcomes achieved per dollar spent, or expressed as Value=Quality/Cost. If the Partnership's interventions result in improvements in quality health outcomes and positive member experience while cost is held constant, we will have improved the value of healthcare to Medicare beneficiaries. The Partnership will integrate alternative funding through improved billing practices to help ensure long-term sustainability. During Q1, the Partnership will work with entities such as Med Chi to address barriers to use of the chronic care management code and to increase provider utilization. Changes to the 2016 Medicare physician fee schedule will include two new advance care-planning codes; we will educate providers and encourage appropriate use. As additional services/codes become reimbursable from the payer(s), we will pursue them.. As we find sustainable reductions to hospital services under the GBR, a portion of those funds will be reinvested in the programs.

Over the longer term, it is unlikely that the funding of these interventions can remain solely the financial responsibility of the hospital secondary to potential changes in the hospital's rates. The hospitals will work with the HSCRC and the payer community to assure that the savings achieved benefit not only the payers but that the savings ultimately flow back to patients.

Participating Partners and Decision-making Process. Include amount allocated to each partner. (300 word limit)

The hospital members of The Community Health Partnership of Baltimore (Johns Hopkins Hospital, Bayview Medical Center, Sinai Hospital, Mercy Medical Center, MedStar Franklin Square Hospital and MedStar Harbor Hospital) all participated in the planning process and contributed to the development of the proposed interventions. A steering committee and multiple subcommittees and workgroups were established. Decision-making was consensus-based. Each hospital agreed to share the costs of leadership and central operational functions proportionate to total revenue. Hospitals were able to select which specific interventions to implement, which created flexibility and made decision-making easier.

Each hospital partner has agreed to pool its .25%. JHH and JHBMC are including an additional .25 to cover interventions not selected by the Hospital partners as Johns Hopkins is not filing a separate application like many of the other hospital partners.

Hospital Partners	amount allocated
Johns Hopkins Hospital (.5)	8M
Johns Hopkins Bayview Medical Center (.5)	2.8M
MedStar Franklin Square Medical Center (.25)	1.1M
MedStar Harbor Hospital (.25)	0.5M
Mercy Medical Center (.25)	1.3M
Sinai Hospital (.25)	1.8M
Total	15.5M

The hospital partners have discussed a governance structure. A finalized structure will be described in a definitive agreement among the parties to be signed by each hospital's President before the end of Q1, calendar year 2016. Each of the hospitals will participate in the governance of the venture and will appoint representatives to a board or operating committee to be formed once the definitive agreement is executed. The board or operating committee will review the previous year's performance, including finances, quality and strategic direction. The board or operating committee will appoint a management company to manage the business and affairs of the venture and provide leadership, grant administration and central services.

Implementation Plan (300 word limit)

The following implementation activities will be launched immediately and simultaneously.

Leadership: Will consist of Director, Administrator, Case Manager and Behavioral Health Program Managers, Project Manager, Provider Champions and a Financial Analyst.

Operations: The leadership team will launch CQI, Analytics, Evaluation, and IT efforts.

Embedded Teams: Embed case managers and health behavior specialists in new and existing primary care sites to establish Community Health Care teams.

Bridge Team: Engage, manage, and coordinate the short-term health needs of patients that are not connected to primary care and/or have urgent/prominent behavioral health conditions and substance use disorders.

House Calls: Provide home-based medical care, care management, caregiver support, counseling, and acute inpatient continuity to high-need, high-cost home-bound individuals longitudinally.

Community-based CHWs: Provide intensive, longitudinal community-based care coordination to mitigate barriers to access, engagement, and adherence.

Neighborhood Navigators: Build capacity through intensive training and mentoring of community residents, who in turn provide social support**,** education, resource connection and linkage to care and promote engagement and help mitigate barriers to appropriate care for all members of the community (payer-agnostic).

Patient Engagement Training: Train providers and staff on the skills needed to facilitate patient engagement, effect health behavior change and promote patient satisfaction.

ED Coordination with CHWs: Deploy CHWs to the EDs to help address social determinants of health barriers and connect patients to a patient-centered medical home.

Convalescent Care: Expand access for people experiencing homelessness who are discharged from the hospital to a place to stay and recuperate from an acute illness or surgery.

SNF Collaborative: Create a SNF Preferred Provider Network modeled on Lifebridge's, conditioning referral relationships on quality and process criteria.

SNF Protocols: Implement standardized protocols for heart failure, COPD, sepsis and other infections, end of life and behavioral health problems.

Home-Based Strategy: Deploy remote patient monitoring and home health aide services.

Budget and Expenditures. Include budget for each intervention (300 word limit)

Personnel	$1,490,977
Information Technology	$395,670
Primary Care Teams/Care Coordination	$2,748,920
Bridge Team	$901,203
House Calls	$606,820
CHWs in the Community	$1,850,771
Neighborhood Navigators	$805,522
Patient Engagement Training	$91,580
ED Coordination with CHWs	$422,825
Convalescent Care	$374,568
Skilled Nursing Facility Collaborative	$0
Skilled Nursing Facility Protocols	$131,050
Home Based Strategies	$953,942
Intervention Monitoring	$519,164
Other Indirect Program Support	$1,041,367
Total Request CY16 (start-up year)	**$12,334,379**

APPENDIX COVER PAGE