**Bay Area Transformation Partnership (BATP)**

Anne Arundel Medical Center

and

University of Maryland Baltimore Washington Medical Center

*Application for*

**HSCRC Transformation Implementation Program**

**December 21, 2015 – Original Submission**

**January 08, 2016 – Revised Submission**

**Explanation of revised submission**

This revised Bay Area Transformation Partnership application submission is per a request from Steve Ports to adjust the University of Maryland Baltimore Washington Medical Center (UM BWMC) portion of the proposal to meet the .5% of Net Patient Revenue per a revised FY15 Schedule RE.

The revised FY15 Schedule RE Net Patient Revenue for UM BWMC is $340,775,700. UM BWMC request of .5% is equal to $1,703,878.

A summary of the original and revised total funding request and per hospital allocations:

|  |  |  |  |
| --- | --- | --- | --- |
| Request | Original Request | **Revised Request** | Notes |
| Total Funding request for BOTH hospitals | $ 4,246,698 | **$ 4,010,576** | Decrease of $236,122 per UM BWMC adjustment |
| Anne Arundel Medical Center allocation | $ 2,306,698 | **$ 2,306,698** | No change |
| University of Maryland Baltimore Washington Medical Center allocation | $ 1,940,000 | **$ 1,703,878** | Decrease of $236,122 |

Please note that the decreased funding request does not impact any of the planned interventions. The reductions were made by removing UM BWMC indirect/overhead costs and reducing the cost of the Ambulatory Care Program Oversight resource, which are costs that UM BWMC plans to absorb.

Minor changes to Return on Investment were made and are identified on pages 16, 17 and 30, and in Appendix F.

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**Letters of Support**

1. Board of Trustees, Anne Arundel Health System, Edward Gosselin, Chair
2. Board of Directors, University of Maryland Baltimore Washington Medical Center, R. Kent Schwab, Chairman
3. Baltimore Washington Emergency Physicians, Joel Klein, MD, FACEP, President
4. Anne Arundel Medical Center, Chief Medical Information Officer, David Mooradian, MD, MBA, FACEP
5. Medical Director of Anne Arundel Medical Center Division of Primary Care, A. Stephen Hansman, MD
6. University of Maryland Community Medical Group, Bahador Momeni, MD, MBA, Medical Director, Anne Arundel Region
7. Maryland Inpatient Care Services, Post-Acute Care, Hung Davis, MD, Co-Founder and CEO
8. Joint Patient & Family Advisory Councils of AAMC and UM BWMC, Jeanne Morris, RN, PFAC Coordinator, AAMC, and Danielle Wilson, MSN, RN, Director of Service Excellence, UM BWMC
9. The Coordinating Center, Carol Marsiglia, Sr. VP Strategic Initiatives and Partnerships
10. Anne Arundel County, Steven R. Schuh, County Executive
11. Anne Arundel County Department of Aging & Disabilities, Pamela A. Jordan, Director
12. Anne Arundel County Mental Health Agency, Inc., Adrienne Mickler, Executive Director
13. Anne Arundel County Department of Health, Jinlene Chan, MD, MPH, Health Officer
14. Office of Human Relations and Minority Affairs, Anne Arundel County, Yevloa S. Peters, Special Assistant to the County Executive
15. Anne Arundel County Partnership for Children, Youth and Families, Pamela M. Brown, PhD, Executive Director

**Appendices**

A. HSCRC Core Outcome Measures Data (supplied by BRG)

B. Berkeley Research Group High Utilizer Strategy Report for Anne Arundel Medical Center and University of Maryland Baltimore Washington Medical Center

C. CRISP Patient Total Hospital (PaTH) Report for AAMC and UM BWMC Total All Payer High Utilizer Patients

D. The Coordinating Center West Baltimore Readmission Reduction Collaborative, ROI

E. Anne Arundel County Department of Aging & Disabilities, Senior Triage Team Proposal

F. BATP 4-year HSCRC Core Return on Investment Calculator

G. BATP Microsoft Project Implementation Work Plan

H. BATP Draft Memorandum of Understanding between AAMC and UM BWMC

## 1. Target Population

In 2016, the Bay Area Transformation Partnership (BATP) is focused on rapidly deploying interventions to reduce the per capita hospital expenditures and potentially avoidable utilization (PAU) of Medicare and aged Dual-Eligible patients. We engaged Berkeley Research Group (BRG) to define the subset of our local Medicare population that will predictably respond most profoundly to our planned interventions, and we have aligned their recommendations with our county’s most recent Community Health Needs Assessment (CHNA). Based upon BRG’s findings, included in Appendix B, in FY 2015 the BATP hospitals provided care to a total of 23,477 Medicare patients, costing $260.5M. Of those, 1,152 are Medicare high-utilizers (>= 3 Inpatient/Observation >=24 hour visits in 12 months), representing $52.8M in total charges and 5,738 visits.

 **Table 1. Medicare High-Utilizers by Zip Code**



|  |  |  |  |
| --- | --- | --- | --- |
| **Zip Code**  | **Unique Patients**  | **Total Visits[[1]](#footnote-1)**  | **Total** **Charges**  |
| 21061  | 144  | 874  | $7.0 M  |
| 21122  | 130  | 621  | 6.3 M  |
| 21060  | 93  | 476  | 4.0 M  |
| 21401  | 86  | 383  | 4.0 M  |
| 21146  | 71  | 354  | 2.9 M  |
| 21144  | 58  | 300  | 3.0 M  |
| 21403  | 57  | 300  | 2.2 M  |
| 21113  | 44  | 218  | 1.6 M  |
| 21114  | 35  | 152  | 1.4 M  |
| 21012  | 34  | 176  | 1.9 M  |
| 21108  | 34  | 160  | 1.6 M  |
| 20715  | 31  | 136  | 1.5 M  |
| 21037  | 30  | 157  | 1.3 M  |
| 21054  | 29  | 138  | 1.2 M  |
| 21409  | 26  | 140  | 1.1 M  |
| 21032  | 19  | 103  | 0.8 M  |
| 21666  | 18  | 74  | 0.7 M  |
| 20716  | 17  | 76  | 0.6 M  |
| 21225  | 15  | 76  | 0.6 M  |
| 21619  | 12  | 57  | 0.6 M  |
| All Other  | 169  | 767  | $8.5 M  |
| **Total**  | **1,152**  | **5,738**  | **$52.8 M**  |

Of the 1,152 high-utilizing Medicare patients, 590 visited AAMC, 705 visited UM BWMC, and 143 (12%) visited both hospitals. This Medicare high-utilizer population represents 5% of the 23,477 AAMC/UM BWMC Medicare patients, and 20% of the hospital-related cost of that same population. In addition to the 1,152 Medicare high-utilizers, BATP will address 108 aged Dual-Eligible patients identified by BRG who represent $5.2M in hospital charges, based on FY2015 data. **BATP’s target population in 2016 therefore consists of 1,260 high-utilizing Medicare and aged Dual-Eligible patients.** BRG will continue, on a quarterly basis, to provide BATP with an updated list of high-utilizing Medicare and aged Dual-Eligible patients so that our interventions will remain focused. Table 1 and its accompanying map display Medicare high-utilizer patients by zip code, number of unique patients, associated number of visits and total hospital charges.[[2]](#footnote-2) The high utilization patterns in the above map, and the prevalence of major, chronic health conditions (diabetes, heart disease, hypertension, CHF, COPD, cancer) correlate with the same information outlined in the CHNA. Notably, mental illness and/or substance misuse affects 66% of BATP’s target Medicare population. BATP’s interventions thus address the somatic and behavioral health needs of our targeted population that are described in the CHNA.

BATP interventions are coordinated such that per capita hospital cost of our high-utilizers will be reduced without shifting the same amount of cost to another health care sector, e.g. post-acute care. Our hospitals will combine efforts with community partners to expand existing initiatives for high-utilizers, such as community-based care management, a Skilled Nursing Facility (SNF) Collaborative and a physician house call service. These existing initiatives, as well as shovel-ready, new initiatives (all described below) make possible the safe placement of complex patients in our community while reducing the total cost of care (TCOC).

Even as BATP focuses heavily on 1,260 high-utilizers in 2016, other interventions (described below), such as the Quality Coordinators and Behavioral Health Navigator Program initiatives, lay the foundation for our medical community to identify and address the rising-risk population seen in our primary care practices: over 10,000 individuals with two or more chronic diseases, who would otherwise become tomorrow’s high-utilizers of our hospitals. Additionally, BATP is fortunate to have its own TCOC “laboratory”, AAMC’s Medicare ACO of 15,000 lives, which yields quarterly aggregate TCOC data (Parts A and B), allowing us to measure the effect of BATP’s interventions and prepare our medical community for Phase 2 of the All Payer Model.

## 2. Proposed Programs and Interventions

In 2016, BATP will implement numerous interventions in collaboration with personnel from hospitals, ambulatory care practices, post-acute care facilities, EMS, Department of Aging & Disabilities, community care management, behavioral health, payer organizations and CRISP. Nearly all interventions are joint efforts between AAMC and UM BWMC’s and involve integration with CRISP (see legend). **The target population for *all interventions* includes Medicare and aged Dual-Eligible individuals with 3 or more inpatient or observations visits (>=24 hours) in a 12 month period**. Some interventions will reach additional, rising risk patients, as described below. The following interventions are planned for CY2016.

**Legend: Superscript A = joint effort between AAMC and UM BWMC**

 **Superscript B = includes CRISP integration**

1. **Shared Care Alerts** A,B are cross-organizational entries in each BATP hospital’s Epic EMR system that document and share (via CRISP) succinct, critical information on high-utilizing patients, in the context of care, such that patient safety is enhanced, and admissions, duplicate testing and unnecessary and potentially harmful interventions may be avoided. Pivotal care decisions are continually made by clinicians encountering patients in high acuity settings. When the complex patient and clinician are new to one another and vital information is unavailable (or indiscernibly lost in a haystack of non-prioritized “data”), the clinician’s default care decision is often to test, admit, and treat more, not less, in an attempt to “cover all the bases”. This approach is often wasteful and dissatisfying to patients and clinicians alike and creates the potential for patient harm. Notably, Care Alerts were developed because clinicians became frustrated with portals and “data dumps” as they tried to find useful information when assessing and treating complex patients that are new to them and are presenting for care in high acuity settings. Clinicians require an easy, rapid, and reliable mechanism of accessing and sharing “need to know right now” information on complex patients, without having to search for it. As an answer to these requirements, Care Alerts were designed and tested by local physicians, yielding promising results already on reducing PAU (see Section 3, Measurement and Outcome for piloting results). Because Care Alerts complement existing workflows and improve the care experience for both patients and clinicians, we anticipate the feature will be rapidly adopted and promoted in the medical community.

Here is an example of a Care Alert, which appears instantaneously as an ED physician opens Mr. X’s medical record: “Mr. X comes to the ED frequently with CHF exacerbations. His shortness of breath usually responds well to 40 mg IV furosemide in the ED with follow up the next day in Dr. Y’s office. Securely text Dr. Y to discuss the case or arrange follow up. Mr. X’s care manager is Ms. Z who can be securely texted to arrange for prescriptions, transportation, etc.”

Care Alerts will provide ED physicians and others with rapidly consumable information regarding each complex patient’s usual clinical presentation, medical needs and support structure, so that care decisions can be tailored to the individual.  Care Alerts are readily visible within Epic at the point of care at both hospitals, from both hospitals, and will be shared via CRISP and viewable within the CRISP Query Portal by any authorized clinician in the state. We anticipate creating a Care Alert for many members of our target population in 2016, increasing in later years to cover most/all of the target population.

Support for Shared Care Alerts includes IT staff from the University of Maryland Medical System (UMMS) and AAMC as well as CRISP engineers. Entry and maintenance of Care Alerts will include clinicians from both hospital and ambulatory settings, plus 2 new UM BWMC hires to increase Care Alert entry (High Risk and Behavioral Health Care Alert creators). A roll-out plan for education and training of clinicians and Care Alert authors will be implemented early in 2016. The Care Alert feature will complement BATP’s other interventions involving community care managers, Senior Triage Team staff from the Department of Aging & Disabilities (DoAD), CareFirst (the region’s largest commercial payer) care managers, and behavioral health providers. The visibility, accessibility and accountability of care team members for complex patients will be enhanced by Care Alerts and will complement Care Plans (see below). Data analytics will be supplied by hospital analysts for monitoring the number of new, revised and retired Care Alerts, and CRISP and BATP will work together to develop utilization reports that show patient charges pre-and post- Care Alert creation dates, in order to assess effectiveness of this intervention.

1. **Shared Care PlansA**,B Complementing Care Alerts, Shared Care Plans are longitudinal, living documents that will be created and shared across public (e.g. DoAD) and private sector agencies and care settings. They are designed to be used for our target population of high-utilizers. Community-based care managers are the primary authors of these documents in hospital Epic systems, although hospital care managers will participate in the content. The Plans will provide detailed information and will "coordinate the coordinators" by documenting for each complex individual the responsible care manager, care management activities, patient goals, and next steps. Sharing Care Plans will reduce waste and duplication of services and effort, and improve patient safety and satisfaction. In 2016, AAMC will create and share at least 250 Care Plans; UM BWMC already incorporates a *significant* amount of care plan information into their highly effective Care Alerts and will expand their use of Care Plans when they begin using outpatient community-based care managers in 2016 and beyond.

Coordination of care management using Shared Care Plans will increase the efficiency and effectiveness of care management because no one encountering the complex patient will need to "start from scratch".  *Care managers, particularly those based in the community, will also be more visible, accessible and accountable for their assigned patients' care and outcomes, a feature that will enhance providers' confidence in the community-based care management model and promote team-based care across settings.* In the example of Patient X (above, in Care Alerts), his Care Manager Ms. Z will have created a Care Plan that is accessible by any ED or hospital clinician or care management staff member. Ultimately the shared longitudinal Plan of Care will thus decrease PAU by demonstrating to providers that, compared to the "business as usual" admission or readmission or skilled nursing facility placement, safe and effective alternatives exist in the community and will be carried out by an accountable team.

The supporting workforce includes: inpatient care managers (AAMC and UM BWMC), contracted outpatient community care managers (The Coordinating Center), and government care managers (DoAD Senior Triage Team). UMMS and AAMC IT staff and CRISP engineers will begin testing in January 2016. The Coordinating Center (TCC), DoAD (for the Senior Triage Team), and hospital-based analysts will monitor the number of shared Care Plans. CRISP and BATP will work together to develop utilization reports that show patient charges pre-and post- enrollment in care management, in order to assess effectiveness of this intervention.

1. **Ambulatory Care Supports**

**1. One Call Care Management**A,B The intervention will allow immediate access to care management resources and assignments for high needs patients who have been identified by ambulatory practices. These targeted individuals are today's high-utilizers as well as rising risk, future high-utilizers. Staffed by two highly trained navigators who will be supported by the Epic Healthy Planet population health EMR platform, this call center for primary care practices will determine, for each patient, current and future care management assignments, facilitate social service needs and research payer-provided benefits for services/supports. This need for a single place to call to determine care management and social/service needs and eligibility, and rapidly direct diverse patients to appropriate resources in the private and public sectors was identified by community practices. The One-Call system will also serve as the conduit to provide social service supports (food, shelter, utilities) that can prevent vulnerable patients from becoming medical high-utilizers. Enabled by Epic’s Healthy Planet features, the One-Call system will also monitor types and volumes of calls to assess community needs, gathering valuable information in real time to help us plan for future resource allocations. For example, if patients in a certain zip code are frequently in need of behavioral health resources, we can plan for the future implementation of those resources in their community.

Support for this intervention in 2016 includes two licensed clinical social workers (LCSWs) for AAMC, supervision by an existing Community Health Improvement Director, and training support from community and government agencies. *UM BWMC will begin participation in 2017 and an additional LCSW will be added then.* Data analytics will be provided by AAMC hospital IT staff, using Epic reports.

**2. Physician House Calls**A,B It is estimated that approximately 500 homebound and chronically ill individuals in our target area are in need of physician house call visits. Both hospitals will use established vendors, such as Capital Coordinated Medicine, to provide regular medical care to home-bound Medicare and aged Dual-Eligible individuals, making it less likely they will have to resort to the ED as their usual place of care. Capital Coordinated Medicine has been engaged by BATP principals to participate in CRISP’s ambulatory integration efforts so that clinical data, including Care Alerts and Care Plans, will be shared with diverse providers encountering these patients. Targeted patients for this intervention include homebound, chronically ill patients who already are, or who are otherwise about to become, high-utilizers of the hospitals.

**3. Quality Coordinators** will support 17 AAMC Primary Care Practices by managing EMR-based registries and dashboards for target populations. In particular, their assistance in managing disease-specific registries (e.g. diabetes, COPD, CHF, hypertension) that identify care gaps will allow primary care physicians to focus on patients who need follow-up care in the practice or more resource-intense interventions, such as community-based care management. Each AAMC primary care doctor, on average, has 2,000 patients and several hundred with complex, chronic disease. Our intervention will touch over 60 physicians, with a focus on the Medicare and aged Dual-Eligible patients in our region.

1. **Expansion of Behavioral Health Services and Integration with Physical Health**A,B
	1. **Integration with Primary Care** A,B This strategy addresses the need identified by the CHNA and our confirmatory analysis indicating that 66% of our target population suffers from either a mental illness or substance misuse or both. With this intervention, a greater number of patients will receive timely access to behavioral health evaluations and treatment, thus promoting better outcomes for behavioral and somatic health and decreasing PAU. UM BWMC will add a full-time Psychiatrist, two outpatient therapists and two administrative support staff to provide behavioral health services at geriatric clinics and primary care practice locations.  At UMBWMC, the Psychiatrist will see approximately 133 new patients, with 330 follow-up visits and will also provide consultative support to primary care providers and supervise the therapists. Two (2) new UM BWMC Behavioral Health Therapists will provide 150 new patient visits and 3,000+ follow-up visits.  AAMC will pilot an LCSW and a front desk coordinator to cover 2 primary care practices with a high number of patients with behavioral health needs. The AAMC resources will provide over 300 new patient visits and over 650 follow-up visits in 2016. Existing psychiatric staff will provide consultative support to the LCSW as well as the primary care physicians who daily provide mental health services already but need support with diagnosis/treatment considerations. Data analytics will be gathered by IT staff and CRISP (measuring number of ED visits for behavioral health diagnoses).
	2. **Behavioral Health NavigatorA,B** AAMC will expand a proven, successful program that facilitates PCP referrals to behavioral health resources and provides evaluation appointments within 48 hours, with careful tracking of patients to ensure follow-up. This service, staffed by 1 LCSW and 1 Referral Specialist, is for patients with mental illness and/or substance misuse who need urgent (but not emergent) needs beyond the primary care setting. UM BWMC plans to explore a similar Behavioral Health Navigator Program in 2017 using the lessons learned from AAMC’s implementation. AAMC will facilitate and track 990 behavioral health referrals for unique patients during 2016. The program’s goal is to reduce ED visits and need for hospitalization owing to behavioral health crisis. Note: AAMC’s early efforts in piloting this program in less than a year have resulted in over 500 patients with high needs for mental health services receiving prompt care in the non-hospital setting. Data analytics will be gathered by IT staff and CRISP.
2. **Community-based Care Management Services**A,B Both hospitals will utilize services of a community care management vendor, The Coordinating Center (TCC), who has a proven track record for successfully reducing 30-day readmissions, episodes of bedded care, and associated costs of high-utilizing patients. These community-based, longitudinal services are a key intervention to reduce utilization of our target patient population. AAMC currently uses TCC for 150-175 patients per month and will add 125 additional patients/month in 2016, concentrating on the population defined by BRG. UM BWMC will begin using TCC services in 2016 at a volume of 140 patients/month. The length of engagement per client is determined individually and can range anywhere from days to several months. Services are telephonic and in person, including visits to the home, in order to promote familiarity and trust and engage patients in self-management skills. We predict a 10% reduction in episodes of bedded care of the target population served by TCC care managers, based in part on TCC’s historical success in Baltimore.[[3]](#footnote-3)
3. **Readmissions AnalysisA, B** This joint hospital effort will thoroughly examine patient readmissions using dedicated resources (**Readmissions Clinical Analyst** at AAMC, **High Risk Care Coordinator** at UM BWMC) who will use CRISP reports, hospital data analytics, patient case review and interviews of high-utilizers to detect patterns that point to hospital-, patient-, or community-based factors that predict post-discharge failure in the community setting. Accordingly, these dedicated staff will make recommendations and devise action plans for reducing readmissions. AAMC experiences 150-200 readmissions per month that will be analyzed. UM BWMC will review approximately 100 readmissions per month.
4. **Skilled Nursing Facility(SNF) CollaborativeA**,B Partners in care of our most vulnerable and high-utilizing Medicare and aged Dual-Eligible patients, SNFs impact our goal of reducing PAU and TCOC. We estimate that currently, in the aggregate, 24% of patients discharged from either hospital to a SNF are readmitted within 30 days. We will develop a *formal* SNF Collaborative with a focus on understanding individual SNF capabilities, setting quality goals, sharing performance data and best practices to improve quality of care and reduce utilization, making care transitions safer and reducing PAU and TCOC. The BATP SNF Reporting Pilot with CRISP will provide data analytics, allowing SNFs to see their own performance (e.g. readmissions, infections, length of stay) as well as that of others. A dedicated **Post-Acute Care Manager** (AAMC) and **High Risk Care Coordinator** (UM BWMC) will facilitate this effort, including goal-setting, data-gathering, monitoring census, performing needs assessments of SNFs, and hosting group learning events.  AAMC and BWMC *EACH* discharge approximately 2,700 patients per year to SNFs. The goal of this intervention will be to reduce PAU (especially readmissions) as well as potentially preventable complications (i.e. wounds, infections) for SNF patients, and length of stay in SNFs. BATP provided a list of SNFs and contacts to CRISP in mid-October, and CRISP is evaluating system and technical capabilities for onboarding 80% of the facilities in the first half of 2016. *Note: the Post-Acute Care Manager and High Risk Care Coordinator will also examine and collaborate with other post-acute care vendors, to include home health agencies and physician house call vendors, with the goal of achieving the safest, most cost-effective community-based placement for our complex patients.*
5. **Department of Aging & Disabilities (DoAD) Senior Triage TeamA,B** will address the non-medical needs of AAMC and UM BWMC  Medicare/aged Dual-Eligible *super utilizers (patients with >=5 inpatient/observation visits in the past 6 months).* The Senior Triage Team will coordinate with hospital discharge planners and EMS teams to identify super-utilizing patients so that care management and social services and supports can be provided to them in order to sustain safe placement at home.  This strategy includes DoAD care managers coming to the hospitals for patients in extraordinary (but sadly not uncommon) circumstances in which there is no safe discharge disposition. They will create a plan for shortening length of stay in the hospital and establish appropriate supports in the community.  Without this resource, AAMC and UM BWMC must seek guardianship for vulnerable patients who otherwise would "live" in our hospital for months. The DoAD Senior Triage Team will be trained on the use of Epic and will contribute to Care Alerts and Care Plans and use these tools to outline services/support information for the super-utilizer patients. As this information is shared via CRISP, it will be visible in the clinical query portal and within either hospital system EMR. The DoAD Senior Triage Team will also educate community and inpatient care managers about the services and supports that are available and how to access them. Approximately 230 extremely high-need Medicare/aged Dual-Eligible patients will be addressed in 2016. The expected outcomes include decreased utilization of EMS and EDs, decreased length of stay, and empowering the individuals to age in place or in the least restrictive environment possible that is self-directed and person-centered. Data analytics and metric tracking will be provided by DoAD, hospital data analysts and CRISP resources (pre- and post- care management assignment costs). Supporting staff will be hired by Anne Arundel County DoAD and includes:
	* (1 FTE) Nurse (RN) Clinical Case Manager/Project Lead to coordinate, provide program oversight, and serve as triage team member and Senior Community Resource Initiative Care Team (CRICT) Navigator
	* (1 FTE) Geriatric Mental Health Case Manager-Triage Team member
	* (1 FTE) Geriatric Social Worker LCSW-C-Triage Team member
	* (1 PTE) Case Manager
	* (1 PTE) RN Case Manager
6. **Creation of *New* and Expansion of Existing CRISP ServicesA,B** As a result of studying the region’s cross-discipline, cross-organizational problem statements concerning population health management, care coordination improvements and patient satisfaction, we determined that creating intervention strategies using our hospital EMR (Epic for both hospitals) in close collaboration with CRISP was the key to the fastest, most effective means of impacting the vast majority of patients in the region.  This adoption of CRISP features by providers and organizations will supply the data analytics necessary to drive clinical performance, reduce PAU, and promote care coordination for our target population.
	1. **SNF Integration and Reporting Pilot**A,B Complementing the SNF Collaborative above, this CRISP/BATP/SNF Integration and Reporting Pilotproject will onboard SNFs to the ENS feature and make data more transparent regarding to which SNFs patients are being discharged, which SNFs are experiencing unplanned transfers and to which hospitals, and whether patients are readmitted after discharge to home from the various SNFs. Eventually the project will expand further such that clinical data will be shared between hospitals and SNFs through CRISP's Clinical Portal, with the goal of coordinating care and avoiding/reducing PAU by enhancing clinical communication and interventions that can prevent unplanned transfers. Our goal is for BATP and CRISP to enroll SNFs such that > 80% of our hospitalized patients who are discharged to SNFs receive care at a facility integrated with CRISP's ENS and Clinical Portal, in other words, approximately 5,000 patients at high-risk for PAU. By having access to SNF ENS data, the SNF Collaborative will be able to analyze and focus patient interventions, examine process improvements and provide targeted SNF training (e.g. wound care, infection control) to decrease 30 day all cause hospital readmissions in 2016.  Another notable outcome: **this subproject will also prepare SNFs for a value-based payment environment and new regulations, e.g. the IMPACT act of 2014, and assumption of risk through bundling or other payment mechanisms.** Primary support for this initiative includes a **Post-Acute Care Manager** (AAMC), and a **High Risk Care Coordinator** (UM BWMC). Additional administrative, project management, inpatient and community care management resources will be utilized for quarterly meetings. SNFs will provide leadership participation, including Directors of Nursing, Administrators and even SNF corporate support. BATP defined and documented the draft reporting requirements in mid-October 2015, which CRISP will use to provide the SNF-related metrics reporting.
	2. **Expansion of CRISP ENS and Clinical Query Portal to Additional Ambulatory Care PracticesA,B** AAMC and UM BWMC have identified ambulatory practices to send/receive ENS alerts and share clinical data with the CRISP Clinical Portal in 2016. We will recruit key clinical practices whose EMRs are not integrated with Epic in order to enhance all of our other strategies, e.g. Care Alerts, Care Plans, as well as share clinical data in order to coordinate care and reduce duplication of services. One example is the sharing of recent imaging results that may prevent having to order advanced imaging twice on the same patient for the same reason. This intervention will impact hundreds of thousands of patients. The intended outcome is to reduce PAU for our target population, and to prepare a Community of Practice to be successful in a value-based payment environment and become accountable for total cost of care.
7. **CRISP Secure Texting PilotA,B** BATP identified the need for secure (i.e. HIPAA-compliant) texting during its planning phase, and worked with CRISP to evaluate and document the requirements for this vitally important means of streamlining communication during transitions of care. AAMC and UM BWMC will pilot secure texting for the state of Maryland in early 2016. PAU can be avoided when quick consultations are readily available: for example, ensuring today's ED patient can be seen in the practice tomorrow or that an EKG finding does not warrant further testing or admission.  Secure texting allows providers to reach one another quickly and share images and lab results from mobile devices. Secure texting vendors also offer other safety features such as "message not read" alerts and team directories for call groups or shift workers, which is essential to the dynamic operations of a health system. Following the pilot, we anticipate all ED clinicians plus key specialists and primary care providers to enroll in secure texting. Our expected outcome is expedited, critical clinician-to-clinician communication in order to improve hand-offs and prevent PAU by reducing obstacles to communication. Secure texting complements and accelerates the effectiveness of the shared Care Alerts and Care Plans, as seen in our illustrative example of Mr. X, above, in the Care Alerts and Care Plans sections. This feature will provide infrastructure in building an accountable Community of Practice responsible for the total cost of care for the population served.
8. **A Joint AAMC/UM BWMC BATP Patient and Family Advisory Council (PFAC) for BATPA,B** Formed during the planning phase, this Council has already enriched the development of the BATP implementation plan. Notably, our two PFACs made clear two things: “We want our doctors to communicate with one another;” and “We want help navigating the health system.” The PFACs would like to continue to hold **joint** quarterly meetings to guide this initiative and help us to incorporate patient and family perspectives.  BATP has integrated numerous suggestions from this group (as evidenced by BATP’s interventions that address their two “wants”, above) and will continue to include them in the implementation and evaluation process.  Each PFAC will also be represented on the BATP Advisory Council.  The joint PFAC feedback has been and will continue to be used in BATP education, training, Care Alert and Care Plan content and SNF Collaborative program development, for example.  BATP strategies and interventions will have a greater likelihood of adoption and promotion because they are informed by the experiences of patients and families, the consumers of care.   Clinical providers will know that BATP strategies have been vetted by patients in the region.  Additionally, a recommendation in the HSCRC Consumer Outreach Task Force Report (August 2015) is to continue to give consumers a voice in the transformation of Maryland’s health system.  This BATP intervention supports that HSCRC recommendation and also supports the part of the “Triple Aim” focused on improving the patient experience of care.
9. **AAMC Collaborative Care Network (CCN)** A clinically integrated network, the AAMC CCN will provide the infrastructure for community providers to transform care delivery and improve quality at the practice level regardless of hospital affiliation or employment status.  The AAMC CCN will in 2016 and 2017 engage approximately 500 physicians in independent and employed primary and specialty care practices that together care for hundreds of thousands of area patients. The AAMC CCN will provide the infrastructure and governance platform wherein practices can take part in incentive programs, such as gainsharing and bundling (through the CCN's Medicare Shared Savings Program ACO) that make possible episode improvements that drive clinical performance and decreased costs. The AAMC CCN will also provide the infrastructure to help practices pursue payment mechanisms (such as Chronic Care Management codes) that sustain efforts in ambulatory-based care coordination, and will provide the field support to promote the use of Care Alerts, Care Plans, secure texting, behavioral health services, One-Call Care Management and Quality Coordinators. *Please note that UMMS has a separate clinically integrated network strategy that is not part of this proposal, which will include UM BWMC once developed.* Support for the AAMC CCN includes two (2) consultants from Advocate Physician Partners (APP) as well as access to numerous Advocate subject matter experts in care management, population health improvement, patient and family engagement, and other areas. AAMC clinical leadership, including the Chair of Clinical Integration, the Executive Director for the CCN, administrative and project management support will be engaged in this program designed to ready the physician community to share accountability for the quality and total cost of care for the regional population.

**How the BATP Interventions and Programs will Improve** **Population Health** - Hospitals alone cannot improve the health of a population. Sustainable community partnerships, coupled with technology, payment reform, and the ability to measure our effectiveness in improving population health while controlling cost, are keys to success. Importantly, the design of the interventions described herein was based upon an extensive, collaborative problem identification process across public, private, government and community organizations. The interventions were developed as solutions to stated problems, and they are designed to improve and coordinate care and promote population health by transforming the way entities think and act regarding their individual, department and agency roles as they care for mutual, complex patients and diverse populations. The problem identification process involved listening and learning about each other’s roles and responsibilities. Cross-organization, multi-disciplinary care redesign exercises examined (and will continue to examine) what data each role captures, who needs it, when, what they do with it, and how it fits within a patient-centric care process. The interventions are scalable, can be applied to any population and are designed to be as efficient as possible (create once/use many times across healthcare settings, such as with shared Care Alerts and shared Care Plans). *The power of BATP interventions is in people and organizations newly coming together as a collaborative team to learn from one another about the population’s needs, and to create efficiencies that show the patient we are communicating with them, about them, and will assist in empowering them with supports and services to proactively manage their own health conditions in the community setting.*

**BATP overlaps with and informs each hospital’s Strategic Transformation Plan and complements each hospital’s past, current and future investments in improving the health of the regional population.**

AAMC’s strategic vision since 2009, “Living Healthier Together”, is embodied in its goals and priorities. “Living Healthier Together” means collaborating with public and private sectors and communities to build sustainable infrastructure and processes outside of the hospital that promote health for all. AAMC was one of the state’s earliest adopters of foundational tools for population health management: integrated EMR (Epic), patient-centered medical home (PCMH) initiatives, PFAC development, and accountable care (as a Medicare Shared Savings Program Accountable Care Organization). AAMC’s commitment to provide the PCMH model of primary care to all, including its most vulnerable populations, is demonstrated by its successful Health Enterprise Zone initiative, which significantly reduced PAU of a large group of super-utilizing Medicare and Dual-Eligible patients. AAMC’s Strategic Transformation Plan for 2016 includes the BATP initiatives and additionally describes plans to greatly expand behavioral health services (partial hospitalization and intensive outpatient programs) and build its clinically integrated network, the Collaborative Care Network, or CCN. The CCN will serve as a platform for AAMC and community providers to share data, resources and opportunities to improve care and create efficiencies, including episode improvements for both acute and chronic conditions. The CCN will in 2016-2018 be the training environment that AAMC provides to its greater medical community (including SNFs, care management and home health vendors, and independent and employed primary and specialty care practices, regardless of hospital affiliation) to develop a Community of Practice ready to assume accountability for the quality and total cost of care for the regional population.

UM BWMC’s mission is to provide the highest quality health care services to the communities we serve. Health care services go beyond clinical care to supportive services designed to improve health. UM BWMC’s hospital strategic plan includes the continuation of existing, successful initiatives to improve population health and reduce PAU, and the expansion, enhancement or addition of other initiatives. UM BWMC’s plan includes UMMS initiatives being deployed system-wide; programs and services to respond to the specific needs of UM BWMC’s patients, medical staff and surrounding community; and collaborative partnerships with interventions that are aligned with UM BWMC/UMMS initiatives. UM BWMC’s plan requires working with internal and external partners to move beyond addressing acute medical and behavioral health conditions to addressing the range of factors that affect health (e.g. social determinants of health, care transitions, proactive chronic disease self-management). A significant component of UM BWMC’s hospital strategic transformation plan includes the portfolio of projects included in the BATP Implementation Plan. The BATP enhances and expands existing successful programs, such as UM BWMC’s ED Case Management and SNF readmission reduction programs and includes significant collaboration with diverse partners to address the non-medical factors that can affect health outcomes. Other aspects of UM BWMC’s strategic plan, such as the Transitional Care Center, palliative care program, community benefit programming and role in the Healthy Anne Arundel Coalition will be aligned with BATP initiatives.

AAMC and UM BWMC leadership recognize that improving the health of Anne Arundel County residents requires a formal, regional partnership that engages our collective partners, makes efficient use of resources, is data-driven, and responsive to the needs of the people we serve. The BATP is a testament to both hospitals’ commitment to the “Triple Aim” of improving the patient experience of care (including quality and satisfaction), improving the health of populations, and reducing the per capita cost of health care in support of Maryland’s All-Payer model. Both AAMC and UM BWMC’s strategic plans stress the importance of our regional partnership and our commitment to Maryland’s framework for health system transformation.

3. Measurement and Outcome
As described in the target population section, the ‘AAMC and UM BWMC High Utilizer Report’ supplied by BRG forms the basis for our target population of Medicare/Aged Dual-Eligible high utilizer population. Total all-payer high utilizer data (2,953 patients) were determined by using the CRISP PaTH Report, per BRG instructions, Appendix C. **Core Outcome Measures, per HSCRC requirements, are attached as Appendix A, and BATP will track those as well as intervention-specific metrics outlined below**. Our intervention-specific measures include the Core Process Measures listed in Appendix A Table 2 of the RFP. BRG has provided the baseline core outcome measure data and will continue to do so on a quarterly basis as we study the impact of our interventions. CRISP and hospital data analysts will work together to provide intervention-specific metrics in CY2016, as outlined below.

The interventions we are building are a set of tools that will be used as needed for the target population, with numerous interventions being used per patient as deemed appropriate by the clinicians and care managers working with the patients. *We have carefully planned how many instances of each intervention we can perform based on the requested funding amount and will use those metrics to track whether we are achieving our goals for number of interventions.*  Notably, the ‘shared’ Care Alerts and Plans will be a ‘create once/use many times’ type of intervention which should compound the savings. The savings per intervention will be tracked primarily through CRISP reports showing pre- and post- intervention costs as outlined in the metrics section.

**BATP Intervention-Specific Measures**

| **Intervention** | **Measures** | **2016 Quantity/Volume Goals**  | **Outcome** |
| --- | --- | --- | --- |
| Shared Care Alerts | a) % of high-utilizer target population with Care AlertsPre- and Post- Care Alert creation:b) ED utilization c) Inpatient admissions d) Per patient charges  | AAMC: >350 Care AlertsUM BWMC: 340 Care Alerts  | >30% reduction in inpatient visits for target population who have Care Alerts at either hospital |
| Shared Care Plans/ Care Management | a) % of high-utilizer target population with Care Plans and % that are shared via CRISPb) % of high utilizers with completed health risk assessmentsPre- and Post- Care Manager assignment measurements of:c) ED utilization d) Inpatient admissions e) Per patient charges Also,f) % of high-utilizers with assigned care managersg) % of high-utilizers who have been offered and have declined care management services | AAMC: >250 Care PlansUM BWMC: most Care Plan information is included in Care Alerts (above) | Decreased PAU by those patients who have care managers and associated Care Plans |
| One-Call Care Management Service | a) # and types of calls received and from what zip codesb) # of referrals provided for Care Management assignmentc) # of referrals to DoAD | AAMC: Approximately 2,100 calls  | Increase the # of Care Management assignments and decrease PAU. |
| Community Care Management | See measures in Shared Care Plans above | AAMC: 275 patients/month capacityUM BWMC: 140 patients/month capacity | 10% reduction in bedded care (IP/Obs > 24 hours) for those patients being seen by The Coordinating Center  |
| Physician House Calls | # of patients referred and receiving services | AAMC and UM BWMC: 500 homebound patients receiving physician house call visits | Decreased PAU due to better chronic condition management  |
| Quality Coordinator Panel Management (4 resources) (AAMC) | % of patients whose chronic conditions are being successfully managed (i.e. diabetes A1C under control) | AAMC: Panel management for 60 physicians each managing several hundred patients with at least 2 chronic conditions | Reduced PAU due to better chronic care management |
| Behavioral Health / Physical Health Integration | # of new visits for expansion in behavioral health resources | AAMC: 300 new patient therapist visitsUM BWMC: 133 Psychiatric new patients, 150 Therapist new patients | Increased access to psychiatric counseling resulting in decreased PAU.  |
| Behavioral Health Navigators (AAMC in 2016, adding BWMC in 2017) | # of behavioral health referrals for unique patients | AAMC: 990 behavioral health referrals | Decreased ED visits  |
| Readmissions Clinical Analysis | # of readmissions analyzed per month and cumulative | AAMC: Assess 150 readmissions/monthUM BWMC: Assess 100 readmissions/month | Reduced Readmissions |
| Skilled Nursing Facility (SNF) Collaborative | a) # of additional Ambulatory and SNF facilities utilizing CRISP ENS and/or Clinical Query Portal.b) 30-day readmission rates, LOS, complications of high utilizers going to/from SNFs who are participating in the SNF Collaborativec) # of patients with completed MOLST forms | AAMC: 2,160 SNF patientsUM BWMC: 2,240 SNF patients | Reduced PAU (Readmissions), Reduced ED visits, Reduced potentially preventable conditions, reduced LOS at SNF, Reduced TCOC |
| DoAD Senior Triage Team | a) # of super-utilizers (>=5 visits) being managed by Senior Triage TeamPre- and Post- Senior Triage Team assignment:b) EMS Utilization c) ED Visits d) Length of Staye) # of guardianships establishedf) patient satisfaction survey results (end of care engagement) | AAMC: 117 super-utilizer patientsUM BWMC: 117 super utilizer patients | Decreased EMS utilizationDecreased ED VisitsDecreased Length of StayDecreased TCOC |
| CRISP ENS/Clinical Query Portal expansion to SNFs | 1. # of SNFs using CRISP ENS
2. # of SNFs contributing to CRISP Clinical Query Portal
 | 80% of SNFs using ENS service, impacting over 5,000 patients | Reduced PAU Reduced 30 day all cause readmissions |
| CRISP ENS/Clinical Query Portal expansion to Ambulatory Practices | 1. # of new ambulatory using CRISP ENS
2. # of new ambulatory practices using CRISP Clinical Query Portal
 | AAMC: 5 Practices representing over 70 providers & hundreds of thousands of patients; UM BWMC: 7 Practices (32 Providers, thousands of patients) | Reduced Readmissions due to timely follow-up post discharge |
| Patient & Family Engagement  | Tracking of Joint PFAC Advisory Council suggestions and incorporation into BATP interventions | Patient and Family advocacy by AAMC and UM BWMC PFAC members | Increased patient satisfaction  |
| Patient Satisfaction | Patient satisfaction surveys by care management | Sample of all patients | High patient satisfaction and continuous improvement process |

Using a bottom-up calculation for each type of intervention and considering both the total number of patients we will touch with each intervention and the expected impact, **we estimate that we will ‘touch’ over 10,000 patients (with our highest-intensity and most resource-rich interventions being applied to our targeted 1,260 high-utilizers) and that approximately 900 patients will have decreased or avoided utilization. The expected impact and outcome predictions (# of patients who will avoid utilization) are based upon the following evidence and supporting information:**

1. The Coordinating Center (TCC) ROI data from the West Baltimore 30-day readmission initiative shows an average of 10% savings in hospitalizations across 3 hospitals was realized in a 1 year time period, with up to a 14% savings achieved at two of the three hospitals, as described in Appendix D.
2. UM BWMC and UM SJMC emergency departments created over 398 Care Alerts (46 and 352 respectively) for unique patients in CY2015. Intra-hospital results on # of ED visits and # of inpatient admissions pre- and post- Care Alert creation were tracked. Although inter-hospital data have not been evaluated and other factors related to the decrease in utilization have not been researched, an impressive 57% decrease in ED Visits and 71% decrease in hospital admissions was observed. We estimate that, conservatively, 30% of patients who have a Care Alert will show a decrease in utilization in 2016.
3. The Anne Arundel County Department of Aging & Disabilities ‘Senior Triage Team Proposal: A Care Coordination Initiative to Improve Community Health through Social and Clinical Systems Approach’ (Appendix E). The DoAD has extensive experience with super utilizer populations and has the resources to assist with non-medical needs. By studying the AAMC and UM BWMC super utilizer populations, where they reside and what problems cause them to repeatedly return to the ED, the DoAD has devised a plan to wrap their entire set of services around the patients. This root-cause approach brings the focus of care to the patient in their living environment.
4. Our Skilled Nursing Facility Collaborative intervention is informed by the methodology and results obtained by UM BWMC where Inpatient Care Management meets each month with SNF Medical Directors, Directors of Nursing, Quality Managers and Administration to focus, measure and take corrective action to reduce 30-day readmissions to/from UM BWMC. In FY2014-FY2015, 3 of the 5 SNFs showed a decrease in readmissions of an average of 7.5%. The other two were lower, showing 1.6% and .4% reductions. Overall, this has proven to be a highly successful program and very satisfying to the SNF participants and hospital. By adding dedicated resources, broadening and formalizing this initiative we anticipate greater reductions in readmissions as well as overall costs.
5. **Local Evidence of Need for and Endorsement** **of BATP Interventions** - The strategies contained herein were vetted by multiple focus groups of physicians, “SNFists”, care managers, social services and the Joint AAMC and UM BWMC Patient & Family Advisory Council. Two over-arching themes were evident in those forums and were echoed in our CHNA: 1) complex patients need help navigating the health system, and 2) providers of care for those complex patients need to be able to communicate with one another easily and quickly. We designed BATP interventions to meet these stated requirements and complement existing workflows so that adoption and promotion of the interventions could happen rapidly and predictably. We kept our interventions simple and easy to understand in order to facilitate their acceptance as part of a new culture of care. For example, a PFAC member described one BATP intervention as follows: “A Care Alert is like an electronic MedicAlert bracelet that follows me across the health system and keeps me safe.” Because of the homegrown nature of BATP remedies to improve care and decrease PAU of our most vulnerable patients, we anticipate successful implementation and positive outcomes.

Volume estimates for **selected** types of interventions for AAMC, UM BWMC, The Coordinating Center and the Department of Aging & Disabilities are as follows, noting that they are not unduplicated patients, with one or multiple interventions being applied to a single patient, as appropriate:

|  |  |
| --- | --- |
| **Intervention** | **# of planned interventions** |
| Care Alert/Care Plans | 690 |
| One Call Care Mgt hotline | 2,100 |
| Behavioral Health/Physical | 783 |
| Community Care Mgt | 1,380 |
| Senior Triage Team | 233 |
| SNF Collaborative | 4,400 |
| Physician House Calls | 500 |
| Total Patients | 10,086 |

Other types of BATP interventions, for example the Quality Coordinators, have the potential to reach tens of thousands of other patients who represent today’s rising risk population that we hope to prevent from becoming tomorrow’s high-utilizers.

## 4. Return on Investment

We have completed the HSCRC-supplied ROI calculator (see Appendix F) for the next four years by incorporating assumptions that: 1) BATP receives the requested $4,010,576 funding in CY2016 and each year beyond, and 2) that BRG and the CRISP PaTH report will supply us quarterly with an updated list of high-utilizing patients to target and 3) that our planned interventions will reduce PAU predictably yet modestly, based on prior evidence and experience.  We expect some overlap of high-utilizing patients from year to year, but we will refine our focus in real time, driven by data from BRG and CRISP, to target those patients with current or "rising risk" patterns of high utilization and relax our efforts for those patients who have "graduated" from the high-utilizing pool. **In the calculator, we list for each year the anticipated ROI on the initial and sustained investment of $4,010,576 in funding, in order to project the ROI specifically for these HSCRC dollars**.  **In keeping with the theme of tracking investment and ROI of HSCRC funds across years, we additionally display the projected intervention cost per patient in HSCRC funding dollars**. As we reach more patients each year, BATP total intervention costs will rise accordingly**.** In order to sustain our anticipated success in reducing hospital utilization by reaching more patients, we anticipate funding the additional intervention costs with savings from previous BATP activities.

Apportioning ROI between hospitals: Since AAMC and UM BWMC operate under GBR agreements, the apportionment of net savings occurs automatically for each hospital as savings are realized when interventions reduce PAU.

Apportioning ROI to Payers:  In 2018 and 2019, BATP proposes to share 10% of annual net savings, proportionate to hospital savings, to payers through a GBR agreement reduction by hospital- or other approved HSCRC methodologies available at that time.

***Reductions in the total cost of care, beyond the hospital, may be realized by BATP interventions. AAMC’s Medicare Shared Savings Program ACO, with 15,000 beneficiaries, affords an opportunity for BATP to measure TCOC, because access to CMS claims data is provided to the ACO for Part A and B costs. Aggregate TCOC data for the ACO will be tracked quarterly, and finalized and reported annually. If savings are significant, they will be shared with ACO participant providers.***

**Our yearly strategy to obtain and sustain ROI for BATP is as follows:**

a)  For CY2016, we will focus on 1,260 high-utilizer Medicare/Aged Dual Eligible patients in our Primary Service Area.  These patients represent $58M in annual baseline charges.  We estimate an annual gross savings of 16%, $9,280,000, and annual net savings of $629,424. ROI = 1.157. This estimate is based on the demonstrated ability of Care Alerts and community-based care management to reduce utilization (see section 3 for a description of demonstrated efficacy.)  **Note that in 2017 and beyond, the annual net savings from the previous year will be reinvested in those interventions that are most effective**.

b) For CY2017, the first full 12 months when all interventions are operational, we intend to address more Medicare high-utilizers/Aged Dual-Eligible patients in our Primary Service Area, reaching a cumulative total of 1,660 patients, representing $76,360,000 in annual baseline charges. We estimate an annual gross savings of 15%, $11,454,000, and annual net savings of $1,716,424.  ROI = 1.428.

c) For CY2018, we plan to expand interventions to include an additional 647 unique patients to include those coming to AAMC and UM BWMC from Secondary Service Areas, and including additional payers (Medicaid, Other), reaching a cumulative 2,307 patients representing $107M in annual baseline charges, we estimate an annual gross savings of 12% or $12,843,336, with an annual net savings of $2,411,092, an ROI of 1.601.  The strategy will include reinvesting the net savings from CY2017 in interventions that are proving to be successful (such as Care Management).  Importantly, we will seek to leverage existing Payer infrastructure for chronic care management, taking advantage of collaboration and communication and utilizing the cross-organizational tools we have developed as both scalable and reusable year over year (such as shared Care Alerts and Care Plans).

d) In CY2019, it is our goal to reach the full 2,953 (based on current data that may change with time) all-payer, high-utilizer patients (determined at that time by using CRISP PaTH reports).  We will again invest CY2018 net savings back into the interventions that are proving to be successful, leverage Payer infrastructure for chronic care management and use CRISP Care Management tools and pre-and post-intervention charge analytics to focus and prioritize interventions.  For the 2,953 patients representing $137,648,200 in annual baseline charges, we estimate a 10% $13,764,820 annual gross savings, with an annual net savings of $2,871,834, an ROI of 1.716.

## 5. Scalability and Sustainability

In order to be scalable, a solution needs to help clinicians, patients and care managers work as efficiently as possible, serving more patients with the same resources, in less time. Our plan takes advantage of the efficiencies gained by collecting, sharing and collaborating with care teams and patients across hospital, ambulatory, insurance, government and private settings. The scalability of these efficiency-driven tools and programs will be realized, as the patient and their care team reap the benefits of streamlined documentation and communication that otherwise would be lost or buried within a single system. For example, Shared Care Plans that enable care managers from all settings to ‘come together’ with and for the patient to help them achieve patient-approved goals, make this tool an efficiency and patient satisfaction gem. One plan, shared by many, avoiding rework and enhancing communication, results in better management of chronic conditions outside of the acute care setting. Shared Care Alerts, another example, are a powerful ‘write once use many times across health systems’ type of intervention, streamlining primary care provider, behavioral health and care manager communication about their most vulnerable patients across numerous, disparate organizations. Scalability comes from the utility in the design and data sharing that occurs instantaneously, presented at the point of care, in context, for a busy clinician to see and use during a patient encounter and available year over year, essentially ‘following’ the patient.

Enabling sustainability: In CY2016 the intervention setup and IT costs will be incurred for designing, building, testing and deploying new, innovative data sharing capabilities across health systems using CRISP ICN. Once the infrastructure is in place and process redesign has been completed, the ongoing maintenance becomes part of the day-to-day operational expense of managing the EMR system in future years, allowing the IT costs to be reinvested in other interventions such as care management (TCC, Senior Triage Team, etc.). Starting in CY2017, about $250,000 of the IT set-up costs can be reinvested in other interventions. Additional funds will become available because AAMC CCN payment is $100,000 less than in CY2016, and BATP annual net savings of an estimated $680,000 can be used to reinvest and scale other interventions that require additional people to scale, such as care management or the DoAD’s Senior Triage Team. In CY2018, $400,000 will become available for reinvestment as the AAMC CCN implementation will be complete. In addition, this is when we plan to fully leverage Payer care management infrastructure along with our set of intervention tools to reach the vast majority of high-utilizing patients, which once again achieves scaling through the use of collaboration, efficiencies and communication across organizations with a focus on a patient-centric model.

Using an iterative approach, we have put together a portfolio of tools and services that we believe will impact the target patient population immediately and effectively. By monitoring effectiveness using data analysis, and a continuous process improvement methodology, we will be able to adjust and keep the interventions that are working, revise or discontinue the ones that are not, and reinvest savings in the tools and services that produce the most profound impact. The tools are designed to be scalable to any target population and the benefit follows the patient from year to year, across care settings.

AAMC and UM BWMC have in 2015 committed to sharing resources to build effective communication tools using the Epic EMR platform and CRISP technology. These tools will be tested and refined and then propagated statewide. Additional learning and resources shared between the two organizations are evident in the One-Call care management system, the SNF Collaborative, the Behavioral Health Navigator Program, and the Senior Triage Team. Finally, each hospital is committed to reinvesting net savings in the interventions that the BATP Governance Board judges to be successful. BATP interventions will help build an integrated Community of Practice, the first step to becoming accountable for the quality and total cost of care for a regional population.

## 6. Participating Partners and Decision-Making Process

The Governance Structure for BATP includes a Board consisting of three members from each hospital as well as an Advisory Council, which will consist of representatives spanning the public, private, and government sectors.  Importantly, the Council will include participants who are actively engaged in the various interventions to improve care coordination and population health for our target population. Advisory Council membership will be confirmed in January 2016.

After careful review of the BATP subprojects with external legal counsel, leadership determined that the most efficient, effective governance structure would be to use a formal Memorandum of Understanding (MOU) between AAMC and UM BWMC as co-leaders of BATP. (See Appendix H for the draft MOU). Tri-party service contract/MOUs will be executed with third parties providing initiative-specific services for BATP.  Business Associate Agreements will be used for data sharing between the hospitals, and between third parties, as appropriate.

How funds flow: The funding will be provided to each lead hospital separately through rate increases. The Coordinating Center and the Department of Aging & Disabilities will bill the hospitals for care management services as per the budget. DoAD bills quarterly, TCC bills monthly. Net savings will accrue to each hospital through the reduction of PAU. Net savings will be reinvested in the following year’s interventions. Accounting and reporting for BATP funding will meet HSCRC requirements, to be determined.

Decision-making process: The Governance Board’s primary responsibilities include budget approval, oversight, allocations and adjustments.  The Board will meet at least quarterly and will incorporate Advisory Council recommendations and assessments regarding subproject performance and effectiveness, intervention portfolio adjustments, issue resolution and risk management. Governance Board Managers will be entitled to vote upon all matters submitted to the Board, and the affirmative vote of the Managers from each hospital (voting as a block) shall be required to take any action.

|  |  |  |  |
| --- | --- | --- | --- |
| **Role** | **Name** | **Title** | **Organization** |
| **Governance Board Managers** |   |   |
|   | Mitchell Schwartz, MD, MBA | Chief Medical Officer | AAMC |
|   | Bob Reilly | Chief Financial Officer | AAMC |
|   | Patricia Czapp, MD | Chair of Clinical Integration | AAMC |
|   | Kathy McCollum | Chief Operating Officer and Senior Vice President | UM BWMC |
|   | Al Pietsch, CPA | Chief Financial Officer and Senior Vice President | UM BWMC |
|   | Christopher DeBorja, MD | Chairman, Department of Medical Services Medical Director of Population Health | UM BWMC |
|  |  |  |
|  |  |  |
|  |  |  |
| **Advisory Council (tentative)** |   |   |
|   | Patricia Czapp, MD | Chair of Clinical Integration | AAMC |
|   | Renee Kilroy, MA | Executive Director, Collaborative Care Network | AAMC |
|   | Rebecca Paesch | VP Strategy & Business Development | UM BWMC |
|   | Christopher DeBorja, MD | Chairman, Department of Medical Services, Medical Director of Population Health | UM BWMC |
|   | Joel Klein, MD, FACEP | President, Baltimore Washington Emergency Services; Epic Product Development, UMMS | UM BWMC |
|   | Dave Mooradian, MD | Chief Medical Information Officer | AAMC |
|   | Pamela Hinshaw, MSN, RN, CCM | Clinical Director of Care Management | AAMC |
|   | Christine Crabbs, MS | Director, Community Health Improvement | AAMC |
|   | Elisabeth Tingo, RN, MSN, CMC | Director, Care Management | UM BWMC |
|   | Mary Jozwik, RN,MHSA,CPHQ | Vice President, Quality and Patient Safety | UM BWMC |
|   | Carol Marsiglia, MS, RN, CCM | Sr. Vice President, Strategic Initiatives and Partnerships | The Coordinating Center |
|   | Pamela Jordan | Director | Anne Arundel Co. Dept. of Aging & Disabilities |
|   | Dawn Hurley | Executive Director Behavioral Health | AAMC |
|   | Sandeep Sidana, MD | Chairman, Department of Psychiatry | UM BWMC |
|   | Jinlene Chan, MD MPH | Health Officer | Anne Arundel Co. Dept of Health |
|   | Adrianne Mickler | Executive Director | Anne Arundel Co. Mental Health Agency, Inc. |
|   | PFAC Member  |  To be determined | AAMC |
|   | PFAC Member  |  To be determined | UM BWMC |

## 7. Implementation Work Plan (Appendix G)

Please see **Appendix G** for a detailed Microsoft Project work plan.

## 8. Budget and Expenditures

|  |  |
| --- | --- |
| Hospital/Applicant:  |  Bay Area Transformation Partnership (BATP)  |
| Number of Interventions:  |  12 main interventions described in section 2 above |
| Total Budget Request ($):  |  $ 4,010,576 |

|  |  |  |
| --- | --- | --- |
| **Workforce/Type of Staff** | **Description** |  **Total 2016** |
| **Creation and Sharing of Care Alerts and Care Plans** |   |  |
| **Existing IT Resources:** |   |  |
| IT Analysts | Build Care Alert and Plan config in Epic, meetings |  **$ 46,520**  |
| IT Managers | Manage Care Alert and Plan config in Epic, meetings |  **$ 33,120**  |
| QA Testers | Sending/Receiving CCDs to/from CRISP |  **$ 19,350**  |
| IT Engineers | Single Signon, Epic to CRISP (new capability for any Epic site, sharable with other hospitals when complete) |  **$ 37,965**  |
| IT Data Analysts | Analytics and Reporting (registries, dashboards) |  **$ 51,720**  |
| **New Hires:** |   |  **$ -**  |
| Behavioral Health Care Plan Creator | create behavioral health care alerts and plans |  **$ 71,207**  |
| High Risk Care Plan Coordinator | create high risk care alerts and plans |  **$ 71,207**  |
| Admin Assistant | administrative duties |  **$ 32,504**  |
| Care Alert/Plan Entry & Team Oversight  | coordinate and oversee team based care alert/plan  |  **$ 75,000**  |
|   | **Subtotal** |  **$ 438,593**  |
| **Data Analytics** | BRG (quarterly reports) |  **$ 80,000**  |
|   | AAMC (CRISP / AAMC monthly subproject metrics |  **$ 17,800**  |
|   | BWMC (CRISP / BWMC monthly subproject metrics |  **$ 65,260**  |
|   | **Subtotal** |  **$ 163,060**  |
| **Support for Primary Care** |   |  |
| **One Call Care Management for PCPs** |   |  |
| LCSW (2 for AA in 2016, 1 for BW in 2017) | Single 'call line' for Care Coordination for PCPs |  **$ 80,000**  |
|   | **Subtotal** |  **$ 80,000**  |
|   |   |  |
| **Quality Coordinators (4)** | Patient panel management & follow-up |  **$ 129,168**  |
|  |   |  |
| **Integration of Behavioral & Physical Health** |   |  |
|  Licensed Clinical Social Workers (LCSW) and Front Desk Coordinator, (AAMC) | Expenses, less revenue for LCSW, Front Desk Coordinator, etc |  **$ 51,600**  |
| Psychiatrist (1), LCSW Therapists (2), Admin Support (2) (BWMC) | BWMC BH resources (all) – Expenses, less revenue for 1 Psychiatrist 6 mo $137,500) , 2 BH Therapists (8 mo $113,333), 2 Admin (8 mo $45,333) benefits 23.5% $69,599. Revenue of $50,000 - personnel and implementation costs = 351,016 |  **$ 351,016**  |
| **Expansion of Behavioral Health Navigator Program** |   |  |
| Behavioral Health Navigator | Behavioral health referrals (April start) |  **$ 56,730**  |
| Referral Specialist | Behavioral health referral support (April start) |  **$ 38,738**  |
|   | **Subtotal** |  **$ 498,084**  |
| **Outsourced Care Management** |  |  |
|  **Community-based Care Managers** | The Coordinating Center |  **$ 725,058**  |
|  **Senior Triage Team Pilot Project (DoAD)** | Department of Aging & Disabilities  |  **$ 188,681**  |
|  Licensed Clinical Social Worker | Super-utilizer care coordination |  |
|  Geriatric Mental Health | Super-utilizer care coordination |  |
|  Registered Nurse | Super-utilizer care coordination |  |
|  2 Part Time Employees | Super-utilizer care coordination |  |
|  | **Subtotal Outsourced Care Management** |  **$ 913,739**  |
| **Skilled Nursing Facility Collaborative** |   |  |
|  Post-Acute Care Manager (AAMC) | Primary liaison with SNFs for quality improvement |  **$ 93,333**  |
|  High Risk Coordinator (BWMC) | Primary liaison with SNFs for quality improvement |  **$ 71,207**  |
|  Admin Assistant (.5 FTE) (BWMC) | Meeting scheduling, materials, minutes |  **$ 32,517**  |
|   | **Subtotal** |  **$ 197,058**  |
| **Patient Readmissions Clinical Analyst (AAMC)** | Perform analysis and action plans for readmission (target) |  **$ 93,333**  |
| **Clinical Transformation Specialist** | Assist IP Care Manager on transformation activities related to BATP care management |  **$ 40,000**  |
| **Program Oversight** |   |  |
| **BATP Program Management** | Overall program management for all regional subprojects |  **$ 260,000**  |
| **BATP Admin Assistant** | Administrative support for BATP initiatives |  **$ 37,500**  |
| **Population Health Manager, BWMC** | Overall coordination of population health subprojects and data for BATP  |  **$ 82,333**  |
| **Population Health Medical Director**  | Strategic Transformation Oversight for BWMC BATP initiatives |  **$ 18,278** |
|  | **Subtotal Program Oversight** |  **$ 398,111**  |
|   | **Subtotal Workforce** |  **$ 2,951,146**  |
|  **IT/Technologies** | **Description** |  |
| **Software Population Health Analysis** | BWMC software for population health analysis  |  **$ 10,000**  |
|  | **Subtotal IT/Technologies** |  **$ 10,000**  |
| **Other implementation Activities** | **Description** |  |
| **Care Alert and Care Plan**  |   |  |
| Trainer | Train clinicians on Care Alerts and Care Managers on Care Plan entry/update |  **$ 36,000**  |
| Physician entry of Care Alerts  | Physician entry of Care Alerts  |  **$ 20,000**  |
| Physician Training hours | Physician Training hours |  **$ 32,500**  |
| Training Material | Training video and hard copy material |  **$ 10,000**  |
| Workstation |  Behavioral Health Care Plan Coord, High Risk Care Plan Coord, .5 Admin |  **$ 6,000**  |
| Phone |  Behavioral Health Care Plan Coord, High Risk Care Plan Coord, .5 Admin |  **$ 750**  |
| IT Access/licenses |  Behavioral Health Care Plan Coord, High Risk Care Plan Coord, .5 Admin |  **$ 15,000**  |
| Mileage/Supplies  | Travel for meetings, travel to PCP offices, printing supplies, etc. |  **$ 3,000**  |
| Educational Materials  |  Patient education materials for target populations |  **$ 30,000**  |
| **One Call Care Management** |   |  **$ -**  |
|  Training for LCSWs | Training by IP Care Mgt (AAMC, TCC, Community) |  **$ 9,600**  |
|  Outreach to PCPs | Travel and other outreach to PCPs |  **$ 2,184**  |
| Educational Materials  | Educational materials on One-Call Care Management  |  **$ 2,000**  |
| Workstations |   |  **$ 4,000**  |
| Phones/Internet |   |  **$ 1,800**  |
| Furniture |   |  **$ 6,400**  |
| **Quality Coordinators (AAMC)** |   |  |
| Workstations | 4 Quality Coordinators (4\*2000) |  **$ 8,000**  |
| Phones | 4 Quality Coordinators (cell, 4\*300) |  **$ 1,200**  |
| **PFAC Advisory Council** | Quarterly Meetings |  **$ 3,200**  |
| **Clinically Integrated Network Consulting for Implementation** | Consulting services to setup Clinically Integrated Network, governance, clinical performance quality metrics, promoting Care Alerts and Care Plans across care settings, establishing centralized care coordination.  |  **$ 500,000**  |
| **Integration of Behavioral & Physical Health** |   |  **$ -**  |
| Workstation  | x2 for LCSW & Front Desk Coordinator |  **$ 4,000**  |
| Office furniture | x2 for LCSW & Front Desk Coordinator |  **$ 6,400**  |
| Phone/Internet | x2 for LCSW & Front Desk Coordinator |  **$ 1,800**  |
| **Expansion of Behavioral Health Navigator** |  |  **$ -**  |
|  Training/Materials | Training of PCPs for Behavioral Health Navigator referral services |  **$ 4,000**  |
| Office furniture | For Behavioral Health Navigator and Referral Specialist |  **$ 6,400**  |
| Phone/Internet | For Behavioral Health Navigator and Referral Specialist |  **$ 1,800**  |
| **Skilled Nursing Facility Collaborative** |   |  **$ -**  |
|  Training/Materials/Meeting Expenses  |   |  **$ 10,000**  |
| Mileage & Supplies |   |  **$ 6,000**  |
| Workstation  | Post-Acute Care resources (1 each hospital),  |  **$ 5,000**  |
| Furniture | Post-Acute Care AAMC |  **$ 3,200**  |
| Phone/Internet | Post-Acute Care resources (1 each hospital),  |  **$ 1,275**  |
| IT Access/licenses | High Risk Care Coordinator BWMC |  **$ 7,500**  |
| **Readmissions Clinical Analyst** |   |  |
| Workstation  | Readmissions Clinical Analyst |  **$ 2,000**  |
| Furniture | Readmissions Clinical Analyst |  **$ 3,200**  |
| Phone/Internet | Readmissions Clinical Analyst |  **$ 900**  |
| **Clinical Transformation Specialist (AAMC)** |   |  **$ -**  |
| Workstation |   |  **$ 2,000**  |
| Furniture |   |  **$ 3,200**  |
| Phone/Internet |   |  **$ 900**  |
| **BATP Admin Assistant** |   |  **$ -**  |
| Workstation |   |  **$ 2,000**  |
| Furniture |   |  **$ 3,200**  |
| Phone/Internet |   |  **$ 900**  |
| **Population Health Manager (BWMC)** |   |  **$ -**  |
| Workstation  |   |  **$ 2,000**  |
| Phone |   |  **$ 250**  |
| IT Access/licenses |   |  **$ 5,000**  |
|   | **Subtotal Implementation Activities:** |  **$ 774,559**  |
| **Other Indirect costs** | **Description** |  |
| Legal fees  | MOU's, Data Sharing Agreements, BAA's |  **$ 50,000**  |
| Sr. Triage Team - Emergency Funds | Emergency funds are for super utilizer support (meds, transportation, housing, food, clothing) |  **$ 15,000**  |
| Indirect Costs - Overhead (HR, etc) |   |  **$ 209,871** |
|   | **Subtotal Other Indirect** |  **$ 274,871** |
| **Total Expenses/investments** | **Total Expenses** |  **$ 4,010,576**  |

## 9. Budget and Expenditures Narrative

In CY2016, BATP is respectfully requesting funding for 12 major implementation activities totaling $4,010,576, with AAMC representing $2,306,698 and UM BWMC representing $1,703,878 of the costs (.5% of net patient revenue plus markup each). Per the RFP instructions, the hospitals understand that the funds will be included in their rates in 2016 and beyond. Investments included in the BATP budget are evaluated using measurable outcomes, as outlined in section 3.

**Percentage of total investment covered by the award**: The interventions in this proposal will primarily be 100% funded through this award except as noted in the behavioral health section, which requests cost minus revenue. Please note that salaries for new hires are prorated considering award announcement timing in February 2016 and lead-time for hiring resources, with most new hires starting May 1.

Shared Care Alerts and Shared Care Plan interventions include: UMMS and AAMC IT personnel costs for Epic build and integration with CRISP, $188,675, a UM BWMC High Risk Care Plan Creator $71,207 and Behavioral Health Care Plan Creator $71,207, Administrative support $32,504, and a clinician who will provide Care Alert oversight at $75,000. Implementation costs include training for clinicians for both hospitals and entry of Care Alerts, $98,500, workstations $6,000, phones $750 and IT access/licenses $5,000 each x 3, mileage and supplies for educating ambulatory care physicians $3,000, and patient education materials for both hospitals $30,000, totaling $54,750. Total cost for Care Alerts and Care Plans comes to $537,093 + $54,750 = $591,843.

Data Analytics will be provided by Berkeley Research Group (BRG) at a cost of $80,000 for weekly meetings, quarterly and as-needed reporting for core measures and target population reports. AAMC and UM BWMC hospital analysts will also provide intervention-specific metrics and their time is budgeted at $17,800 and $65,260 respectively for the year, bringing the total Data Analytics cost to $163,060. UM BWMC has an extensive Care Alert/Plan and registry design associated with their Transitional Care Center to serve high utilizing patients. Also, UM BWMC population health analytics software $10,000 will be used to visualize data at the hospital level.

One-Call Care Management hotline staffing includes two Licensed Clinical Social Workers at a cost of $80,000 prorated for a May 1 start, and will be setup and managed at AAMC, with UM BWMC joining the call center in 2017. Implementation activities include extensive training for the LCSWs on community and government agency resources and operations, and Epic system and call center training (80 hours \* $60/hour = $9,600), PCP outreach ($2,184), educational materials ($2,000), 2 workstations ($4,000), phones/internet ($900\*2), office furniture $6,400, totaling $25,984. Total cost for One Call Care Management in CY2016 is $105,984.

Four (4) AAMC Quality Coordinators managing target patient population panels in ambulatory clinics will cost $129,168 ($48,438 salary for 4 people for 8 months May 1 start). Workstations (4 x $2,000) and cell phones (4 x $300) bring the total for this intervention to $138,368.

The Behavioral Health and Physical Health integration activities are budgeted taking into consideration revenue that will be generated and thus we are requesting only costs minus revenue. UM BWMC resources include a Psychiatrist (6 months $137,500), 2 Therapists (8 months $113,333), and 2 Administrative Assistants (8 months $45,333) plus 23.5% benefits ($69,599) totaling $365,765. Implementation costs include supplies ($10,000), workstations ($10,000), billing fees ($4,000), malpractice coverage for the Psychiatrist ($5,750), dues, books and subscriptions for the Psychiatrist and Therapists at $5,500. With estimated revenue of $50,000, the total cost for UM BW Behavioral Health integration intervention is $351,016.

The AAMC Licensed Clinical Social Worker and Front Desk Coordinator will see patients in the primary care setting. The costs include $93,000 in salaries, $2000 monthly rent for 9 months, 2 workstations (2x$2,000), phone/internet ($900x2) and office furniture ($3,200x2) totaling $12,200 bringing total cost to $123,200. Revenue is estimated to be $59,400 which includes 990 visits (1/3 being for new patients at $72/hour and 2/3 for follow-up visits at $54/hour). Total cost minus revenue is $63,800.

The cost to extend the successful Behavioral Health Navigator Program at AAMC includes a Navigator and a Referral Specialist with prorated salaries of $56,730 and $38,738 respectively, given an April 1 start date. Implementation costs include training materials to educate physicians about the service ($4,000), office furniture ($6,400) and phone/internet ($1,800). Total cost for the Behavioral Health Navigator program is $107,668.

Community care management services will be provided to both hospitals by The Coordinating Center (TCC). AAMC currently uses TCC services and will increase the volume by 125 additional patients per month at a cost of $385,000 for 12 months. UM BWMC will engage, for the first time, community care management services. Using a prorated cost that considers the lead-time for contract development and hiring of four (4) Health Coaches and one (1) Scheduler/In-Take person including benefits totaling $212,140. Implementation costs include Care at Hand Technology (TCC Health Risk Assessment software) $18,000, travel expenses ($7,200), $2,250 for mobile phones and $36,246 for patient support dollars (used for emergency funding for essential items) and $64,222 overhead. For UM BWMC, this intervention will serve 140 patients per month. Total investment for TCC care management services for both hospitals in CY2016 is $725,058.

The Department of Aging & Disabilities Senior Triage Team, serving our super-utilizer population with care management and non-medical services and supports will be an equally shared cost between the two hospitals. This cost includes three (3) full-time resources, salaries prorated for May 1 start; Registered Nurse $51,449, Geriatric Mental Health LCSW $43,985, LCSW $43,985, and two (2) part-time social workers $49,261. The resource costs will be billed quarterly by DoAD, and total $188,681. Additionally, based upon DoAD experience with crisis intervention for super-utilizer patients, this request includes a $15,000 emergency funding request for urgent needs for items such as medications, transportation, housing, food and clothing, included in indirect costs.

The Skilled Nursing Facility Collaborative includes the costs for staffing a Post-Acute Care Manager for AAMC at $93,333, a High Risk Care Coordinator for UM BWMC at $71,207, and .5 Administrative Assistant at $32,517, all prorated for a May 1 start. Shared implementation costs (split by the hospitals) include; $10,000 for training materials for SNF staff education, meeting expenses and materials, $6,000 for mileage and supplies. AAMC costs include a workstation ($2,000), office furniture ($3,200) and phone/internet ($900) for AAMC Post-Acute Care Manager. UM BWMC High Risk Coordinator workstation ($3,000), phone/internet ($375) and IT licenses/access ($7,500). Total cost for SNF Collaborative is $230,033 in CY2016.

An AAMC Patient Readmissions Clinical Analyst costing $93,333 (prorated for May 1 start) will provide crucial review and follow-up of readmissions and will require a workstation ($2,000), furniture ($3,200) and phone/internet ($900), totaling $99,433.

An AAMC Clinical Transformation Specialist, working closely with the Inpatient Director of Care Management to adjust work processes and analysis related to BATP initiatives will cost $40,000 (prorated to 8 months) and will require a workstation ($2,000), office furniture ($3,200) and phone ($900) with a May 1 start date. Total cost for the Clinical Transformation Specialist is $46,100 in CY2016.

The Joint Patient and Family Advisory Council (PFAC) will meet quarterly, and a budget of $3,200 to cover the meetings is included. Joint PFAC input is key to intervention and process improvements.

Costs for implementation of the AAMC Collaborative Care Network (CCN), a clinically integrated network, includes two consultants from Advocate Physician Partners (APP). The implementation payment schedule and major tasks include: January: finalize contract/work order. Payment # 1 $125,000. February – April: Establish clinical integration network structure and governance, train physician leaders, establish key committees, acquire baseline clinical, utilization, and patient access data of participating providers, Develop clinical performance measures, standards and reporting mechanisms. May – July: Payment #2 $250,000: begin registries and data collection, promote One-Call Care Management, Behavioral Health Navigator and the Senior Triage Team services, develop Patient Outreach Program, explore gainsharing and bundling through Medicare Shared Savings Program ACO, develop performance improvement plan and process, begin NCQA accreditation application for ACO. August – December: Payment #3 $125,000 Review and evaluate current inpatient care management design and oversight, define common approach to patient and family engagement in care coordination and transitions, implement post-acute strategies system-wide, develop Reports for Data Analytics, Decision Support, Provider progress reporting, pursue gainsharing and bundling and submit NCQA accreditation application for ACO. Total $500,000.

BATP Program Oversight will be provided by a Project Management Professional (PMP) consultant who specializes in large-scale implementations, systems integration and HIE-specific use cases and implementations at a cost of $130,000 per hospital. UM BWMC will hire a Population Health Manager to oversee intervention subprojects at a cost of $82,333 prorated salary, workstation ($2,000), phone ($250) and IT licenses/access ($5,000). BATP administrative support for AAMC will total $37,500 (prorated) and will require a workstation ($2,000), office furniture ($3,200) and phone/internet ($900). A UM BWMC Medical Director Population Health will provide strategic leadership for all BATP initiatives by educating providers about the health system transformation and advocating the adoption of strategies and tactics to improve the quality of care, increase care coordination, reduce utilization and decrease costs ($18,278). Total Program Oversight cost is $411,461.

Other Indirect costs include legal fees for MOU’s, BAA’s $50,000 and AAMC overhead of $209,871 to cover HR and other related costs associated with staffing. A shared cost of $15,000 for emergency funds for super-utilizer patients for the Senior Triage Team is included in indirect costs. Total indirect costs equal $274,871.

## 10. Proposal Summary

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|  Hospital/Applicant:  |  Bay Area Transformation Partnership (BATP)  |
| Date of Submission:  |  12/21/15 original submission, 01/08/16 revised submission |
| Health System Affiliation:  |  Anne Arundel Medical Center and University of Maryland Baltimore Washington Medical Center  |
| Number of Interventions:  |  12 major interventions as described in section 3 |
| Total Budget Request ($):  |  $ 4,010,576 |

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| **Target Patient Population**  |
| The Bay Area Transformation Partnership’s (BATP) target population in 2016 includes 1,260 high-utilizing Medicare and aged Dual-Eligible patients residing in the primary service areas for Anne Arundel Medical Center and the University of Maryland Baltimore Washington Medical Center. This includes 1,152 Medicare high utilizers (>=3 inpatient or observation visits >=24 hours) and 108 aged (>=65 years) Dual-Eligible individuals. Table 1 on page 1 lists the primary service area zip codes and shows a map of the areas. Berkeley Research Group (BRG) provided the baseline data for our target population and will continue to update this information on a quarterly basis throughout CY2016. Even as BATP directs its high-intensity, resource-rich interventions at this population of 1,260 in 2016, at the same time, work will begin on addressing the rising-risk population, as described in the narrative.In years 2017 thru 2019, we aspire to cumulatively expand the scope of target patients to include the high utilizers from all payers, adding segments each year, including portions of the rising-risk population, based upon our data analysis, resource and volume capabilities and BATP-generated funds that will be reinvested back into interventions for the target populations. We anticipate that in 2019 we will have the capacity to reach all-payer high-utilizers while addressing rising-risk members of the population, in order to appreciably reduce the per capita total cost of care. |
| **Summary of program or model for each program intervention to be implemented. Include start date, and workforce and infrastructure needs**  |
| The work plan demonstrates significant preparatory work in 2015 that extends through January 2016 in anticipation of an early February award announcement.

| Intervention | Start Date | Workforce and Infrastructure Needs |
| --- | --- | --- |
| A. Shared Care Alerts | 2/1/16  | $ 591,843 |
| B. Shared Care Plans | 3/1/16  | Included in above |
| Data Analytics | 1/1/16 | $ 173,060 |
| C. Ambulatory Care Supports |  |  |
| 1. One-Call Care Management
 | 2/1/16 | $ 105,984 |
| 1. Physician House Calls
 | 1/1/16 | No funds required |
| 1. Quality Coordinators (AAMC)
 | 2/1/16 | $ 138,368 |
| D. Expansion of Behavioral Health and Integration with Primary Care |  |  |
| 1. Integration of Behavioral Health with Primary Care
 | 2/1/16  | $ 414,816 |
| 1. Behavioral Health Navigator Program
 | 1/1/16  | $ 107,668 |
| E. Community Care Management  | 1/1/16 for AAMC 5/1/16 for UM BWMC  | $ 725,058 |
| F. Readmissions Analysis | 2/1/16 begin hire 5/1/16 start services | $99,433 |
| G. Skilled Nursing Facility Collaborative | 1/1/16  | $230,033 |
| H. DoAD Senior Triage Team | 1/1/16 develop materialApril hire, May Training,6/1/16 services begin | $188,681 |
| Clinical Transformation Specialist | 5/1/16 | $ 46,100 |
| I. CRISP Service Expansion |  |  |
| a) SNF Integration & Reporting Pilot  | 11/12/15 Sites identified for CRISP1/1/16 CRISP start | Cost covered by CRISP  |
| b) Ambulatory Care ENS and Clinical Query Portal expansion | 10/30/15 Sites Identified for CRISP1/1/16 CRISP start | Cost covered by CRISP  |
| c) CRISP Secure Texting Pilot | 10/1/15 Requirements 12/11/15 RFP reviews3/1/16 AAMC/UM BWMC Pilot Secure Texting | Cost covered by CRISP and absorbed by AAMC/UM BWMC resources |
| K. Joint Patient & Family Advisory Council | 1/1/16  | $ 3,200 |
| L. AAMC Collaborative Care Network | 1/1/16  | $ 500,000 |
| BATP Program Oversight | 1/1/16 | $ 411,461 |
| Indirect Costs | 2/1/16 | $ 274,871 |

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| **Measurement and Outcomes Goals**  |
| The overarching goal of BATP for 2016 is to decrease the potentially avoidable hospital utilization (PAU) of our target population and realize an annual gross savings of $9.28M (16% of annual baseline charges), resulting in $4.6M in variable savings. A **sampling** of intervention-specific measures and outcomes (using the letters corresponding to section 3 above):A. Shared Care Alerts - % of target population with a Care Alert, pre- and post- Care Alert ED utilization, inpatient admissions and per patient charges.B. Shared Care Plans and E. Community Care Management - % of target population with Care Managers and Care Plans and % shared via CRISP; pre- and post- care manager measures - ED visits, inpatient admissions, per patient charges; % of patients who declined services. We predict a 10% reduction in bedded care for those patients who have care management services. C. Ambulatory Care a) One-Call Care Management – number and types of calls, patient zip code, number and types of referrals made. b) Physician House Calls – number of patients referred and number receiving services.c) Quality Coordinators (AAMC) - % of target population whose conditions are being successfully managed by their PCP D. Behavioral and Physical Health integration – number of therapy and psychiatry visits and navigator referrals for target population and impact on ED visits, inpatient/observation visits, LOS. G. Skilled Nursing Facility Collaborative - touching 4,400+ patients, track 30-day readmission rates of target population. Expected outcome is reduced readmissions, reduced ED visits, reduced potentially preventable conditions and reduced length of stay in SNFs.H. Senior Triage Team (DoAD) - # of super-utilizers being managed, pre- and post- care manager assignment track; per patient charges, EMS utilization, ED visits, length of stay, number of guardianships established, and patient satisfaction. Outcome should be decreased EMS utilization, decreased ED visits and decreased length of stay.I. CRISP Services - # of SNFs and ambulatory practices using ENS and Clinical Query Portal. |

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| **Return on Investment. Total Cost of Care Savings.**  |
| CY2016 focus will be on 1,260 high utilizer Medicare/Aged Dual Eligible patients with 2 or more chronic conditions in our Primary Service Area.  We expect an annual gross savings of 16%, $9,280,000, and annual net savings of $629,424. ROI = 1.157.  Each year, the annual net savings will be reinvested in those interventions that are most effective, and will be applied within the following calendar year.CY2017: Expand to an additional 400 Medicare high utilizers/Dual-Eligible Aged patients in our Primary Service Area, reaching a cumulative total of 1,660 patients, realizing an annual gross savings of 15%, $11,454,000, and annual net savings of $1,716,424.  ROI = 1.428CY2018: Include an additional 647 unique patients including Secondary Service Areas, and additional payers (Medicaid, Other), reaching a cumulative 2,307 patients, reaching an annual gross savings of 12% or $12,843,336, annual net savings of $2,411,092, and an ROI of 1.601.  Importantly, we will seek to leverage the Payer infrastructure for chronic care management, taking advantage of collaboration and communication and utilizing the cross-organizational tools we have developed as both scalable and reusable year over year (such as Care Alerts and Care Plans). CY2019: Aspire to reach the full 2,953 all-payer high utilizer patients and leverage Payer infrastructure for chronic care management, use CRISP Care Management tools to focus and prioritize interventions.  An expected 10%, $13,764,820, annual gross savings and annual net savings of $2,871,834, an ROI of 1.716.            Apportioning ROI to Payers:  In 2018 and 2019, BATP will share 10% of annual net savings, proportionate to hospital savings, to payers through a GBR agreement reduction by hospital or other approved HSCRC methodologies. Since the hospitals receive funds via rate increases, the apportionment of savings for the hospitals occurs automatically for each hospital as savings are realized as the interventions result in reduced PAU. |
| **Scalability and Sustainability Plan**  |
| The scalability of our model comes from the efficiencies gained by creating and using multi-disciplinary, cross-organizational people, processes and tools to aid in streamlined care coordination and population health management. Scalability is also gained by widening and strengthening our network of BATP participants based upon the focus of each year’s target population, for example, leveraging Payer infrastructure and programs for care management in 2018 and 2019.Sustainability without additional rate increases will be obtained by: a) Using resources once to implement interventions which then become incorporated into everyday operations for hospital (ED, inpatient care managers), ambulatory and specialty care providers, post-acute care settings (SNFs) and private/government and payer care management, b) Creating interventions and tools that are themselves built once, and then shared with both hospitals by CRISP and available in their portal, following the patient year over year across care settings (shared Care Alerts, shared Care Plans), c) Reinvesting our annual net savings back into the resource-intense, hands-on interventions such as behavioral health navigation and psychiatric therapy and treatment, d) Risk stratifying our patient populations and using different types of resources appropriately, e.g. Quality Coordinators for rising-risk populations, The Coordinating Center for high utilizers, the Senior Triage Team for super-utilizers and those with significant non-medical support/service needs.  |

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| **Participating Partners and Decision-making Process. Include amount allocated to each partner.**  |
| The Governance structure for BATP includes a Board consisting of three Managers from each hospital who have met throughout the planning phase, to manage the initiative going forward. In addition, there will be an Advisory Council consisting of representatives spanning the public, private, and government sectors.  Importantly, the Council will include participants who are actively engaged in the various interventions to improve care coordination and population health for our target population. Advisory Council membership will be confirmed in January 2016.After careful review of the BATP subprojects with external legal counsel, leadership determined that the most efficient, effective governance structure would be to use a formal Memorandum of Understanding (MOU) between AAMC and UM BWMC as co-leaders of BATP. Tri-party service contract/MOU will be executed with third parties providing initiative services for BATP.  Business Associate Agreements will be used for data sharing between the hospitals, and between third parties, as appropriate. Decision-making process: The Governance Board’s primary responsibilities include budget approval, oversight, allocations and adjustments.  The Board will meet at least quarterly and will incorporate Advisory Council recommendations and assessments regarding subproject performance and effectiveness, intervention portfolio adjustments, issue resolution and risk management. Governance Board Managers will be entitled to vote upon all matters submitted to the Board, and the affirmative vote of the Managers from each hospital (voting as a block) shall be required to take any action.  **Funding allocation for each hospital:** **AAMC: $ 2,306,698****UM BWMC: $ 1,703,878****Total BATP Request: $ 4,010,576** In CY2016, there are two vendors who will bill the hospitals for care management services: The Coordinating Center and the Department of Aging & Disabilities for the Senior Triage Team intervention. Otherwise, there are no fund distributions to agencies outside of the hospitals in CY2016. |
| **Implementation Plan**  |
| **Highlights from the BATP Implementation Plan**

|  |  | **AAMC** | **UM BWMC** | **CRISP** | **TCC** | **DoAD** | **SNFs** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **January** | Physician entry of Care Alerts Test Care Alert CCD exchange AAMC/CRISPConfigure shared Care Plans (Epic)Write job descriptions: new hiresObtain updated target pop list  | √√√√√ | √√√ | √ | √ | √ |  |
|  |  | **AAMC** | **UM BWMC** | **CRISP** | **TCC** | **DoAD** | **SNFs** |
| **Feb** | Go-live shared Care Alerts AAMC to CRISPCare Alert re-configuration **HSCRC Announcement of Implementation Grant Awards** Kick-off BATP Implementation phase*Initiate hiring process for new hires (start nlt May 1)**11 AAMC, 10 UM BWMC, 5 DoAD*Develop training plansAAMC CCN meetings | √√√√√ | √√√√ | √√ | √√√ | √√√ | √ |
| **March** | UM BWMC Go-live Shared Care AlertsPilot Secure Texting (CRISP) Quarterly meetings:a) SNF Collaborativeb) PFACc) Advisorye) Governance | √√√√√√ | √√√√√√ | √√ | √ | √ | √√ |
| **April** | Test shared Care Plans w/CRISPContinue hiring  | √√ | √√ | √ | √ | √ |  |
| **May** | New Hires Begin Work Cross-training sessions (Senior Triage, One Call Care Management, community care managers & DoAD using Care Plans, Readmissions Analyst, Quality Coordinators, Post-Acute Care Manages) | √√ | √√ |  | √√ | √√ | √ |
| **June** | Shared Care Plans liveUM BWMC Psychiatrist StartsCRISP ENS/Query Portal onboarding complete for SNFs, Ambulatory Practices Quarterly meetings (as above) | √√√ | √√√√ | √√√ | √ | √ | √√ |
| **Jul – Sep** | All 12 interventions fully operational Monitoring and process improvementEvaluate interventions/metricsQuarterly meetings (as above) | √√√√ | √√√√ | √√√ | √√√ | √√√ | √√√ |
|  |  | **AAMC** | **UM BWMC** | **CRISP** | **TCC** | **DoAD** | **SNFs** |
| **Oct - Dec** | Monitor & improve interventionsReport & evaluate metrics, make recommendations for 2017Quarterly meetings (as above) | √√√ | √√√ | √√ | √√ | √√ | √√ |

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| **Budget and Expenditures** |

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| Intervention | Budget |
| A. Shared Care Alerts | $ 591,843 |
| B. Shared Care Plans | Included in above |
| Data Analytics | $ 173,060 |
| C. Ambulatory Care Supports |  |
| 1. One-Call Care Management
 | $ 105,984 |
| 1. Physician House Calls
 | No funds required |
| 1. Quality Coordinators (AAMC)
 | $ 138,368 |
| D. Expansion of Behavioral Health and Integration with Primary Care |  |
| 1. Integration of Behavioral Health with Primary Care
 | $ 414,816 |
| 1. Behavioral Health Navigator Program
 | $ 107,668 |
| E. Community Care Management  | $ 725,058 |
| F. Readmissions Analysis | $99,433 |
| G. Skilled Nursing Facility Collaborative | $230,033 |
| H. DoAD Senior Triage Team | $188,681 |
| Clinical Transformation Specialist | $ 46,100 |
| I. CRISP Service Expansion |  |
| a) SNF Integration & Reporting Pilot  | Cost covered by CRISP  |
| b) Ambulatory Care ENS and Clinical Query Portal expansion | Cost covered by CRISP  |
| c) CRISP Secure Texting Pilot | Cost covered by CRISP and absorbed by AAMC/UM BWMC resources |
| K. Joint Patient & Family Advisory Council | $ 3,200 |
| L. AAMC Collaborative Care Network | $ 500,000 |
| BATP Program Oversight | $ 411,461 |
| Indirect Costs | $ 274,871 |
| **Total Budget** | **$ 4,010,576** |
| AAMC Allocation | $ 2,306,698 |
| UM BWMC Allocation | $ 1,703,878 |

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1. Visits include Inpatient, Observation, and ER encounters [↑](#footnote-ref-1)
2. Target population data supplied by Berkeley Research Group (BRG) ‘High Utilizer Strategy’ report dated November 19, 2015, **Appendix B**. [↑](#footnote-ref-2)
3. Estimate is based on The Coordinating Center West Baltimore Readmission Reduction Collaborative where Care Management services for 3,119 patients over a 1 year period covering 3 hospitals produced an average of 10% reduction in hospital costs associated with readmissions. [↑](#footnote-ref-3)