Steward Carney Hospital

Delivery System Transformation Initiatives
Proposal for the Massachusetts Section 1115 Waiver

Demonstration Years 15 - 17

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Executive Summary

In 2014, more than 150,000 new individuals may enroll into the Massachusetts Medicaid program (MassHealth) (more than an 11% increase over current enrollment) as a result of the Patient Protection and Affordable Care Act. Given this potential growth in new beneficiaries, it is critical that "disproportionate share," or safety net providers of high-volume Medicaid patients like Steward Carney Hospital (Carney), build adequate infrastructure and are appropriately rewarded to effectively provide quality care to such beneficiaries in a sustainable manner.

The intent of the Delivery System Transformation Initiative (DSTI) Program in the Massachusetts Medicaid Section 1115 Waiver is to ensure that safety net providers like Carney are making the appropriate investments in their infrastructure and care coordination capabilities to not only succeed under this new paradigm, but to lead the Commonwealth in delivering high quality, integrated, cost effective health care to their diverse populations. The DSTI program is aligned with Steward's mission of providing high quality, affordable health care at the right place, at the right time – in the community. Since its early stages, Steward has sought to position itself as a leader in health care and delivery system transformation. Steward is one of only 32 organizations selected nationally as a Medicare Pioneer Accountable Care Organization (ACO), now under a risk-sharing arrangement for approximately 37,000 Medicare beneficiaries.

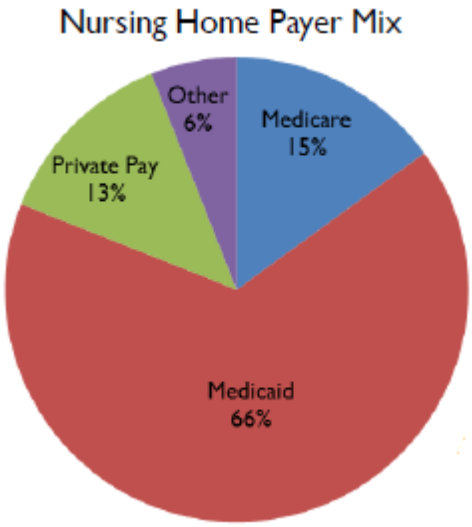
Steward's community care model is centered on a strong foundation of fully integrated primary care providers and community hospitals that coordinate patient care in community-based settings among multiple providers, as well as across diverse geographic regions of eastern Massachusetts. In fact, Steward's geographic footprint provides services to over 86 communities spanning over 100 miles across eastern Massachusetts. Located in Dorchester, Massachusetts, Carney is one of ten hospitals that comprise Steward's community-based, integrated model of care.

Steward strongly believes that meaningful delivery system transformation, particularly for safety net hospitals, is important to achieving the triple aim. Steward is driving innovative solutions to improve the quality of health care, while maintaining affordability and access for vulnerable populations. Steward has successfully integrated its ten hospitals and physician network through extensive investments in information technology and infrastructure re-design. As Steward transforms into a fully accountable care organization, it has turned its attention to post-acute care entities and appropriate care transitions. Carney's proposed initiatives – fully aligned with Steward's overall mission – will not only hold Carney accountable but will also help inform providers across the United States with examples of how to successfully build a pathway toward sustainable, quality care that prioritizes positive care outcomes and lower cost.

Through the proposed DSTI projects, Steward will further enhance Carney's position as an integrated, accountable care provider in the Dorchester community by strengthening its care management and transitions in care capabilities, as well as its relationships with post-acute providers. The proposed projects build from work Steward has already accomplished at other sites and through its own initiative to become a fully integrated community care system. In addition, the proposed projects further Carney's commitment to become a Geriatric Center of Excellence and better serve the needs of elders in the community. These projects will aid both Carney and Medicaid in preparing for the impending expansion of Medicaid beneficiaries in 2014 by improving care and outcomes for Medicaid beneficiaries and subsequently lowering the overall cost of care through risk-based payment models.

Specifically, the proposed projects will assist culturally diverse patients to navigate the health care system and receive primary care, understand the care they are provided, as well as improve the quality of post-acute

care and care transitions. The final proposed project brings all of this work together under a Medicaid global payment pilot that will be conducted either with Medicaid fee-for-service beneficiaries, or through a participating Medicaid Managed Care Organization (MCO).



In Massachusetts, Medicaid is the predominant payer for nursing home services, as illustrated in the graphic.[1] While nearly 20% of Carney's patient encounters are patients with Medicaid as the primary insurer, nearly 30% of Carney's patient population is covered by Medicaid for post-acute services. As such, initiatives targeting reductions in post-acute care spending will improve the overall quality of care and ability to manage the care of patients for which Medicaid is a significant payer.

Projects selected as part of the DSTI program are designed to further build upon Steward system-wide accomplishments, strengthen Carney's geriatric strategy, enhance the patient experience for Carney's diverse patient population, and further enhance Carney's capabilities to participate in global, risk-based payment arrangements. Projects are organized around three goals:

1. Implementing cross continuum health system navigation tools for culturally diverse patients;
2. Maximizing care coordination with post-acute care providers, including mitigating preventable readmissions, and standardizing care processes; and
3. Leverage global risk-based payments to drive reform and encourage better health care outcomes for patients.

Under the first goal are Projects 1.1 and 2.3, the implementation of bilingual, culturally competent community health workers and the use of Clinical and Patient/Family Care Maps. Both initiatives are designed to guide certain vulnerable populations through the care continuum and ensure that they are empowered to seek and access the care they need at the right time, in the right setting. In Project 1.1 community health workers will interact directly with patients and facilitate use of primary care by connecting patients to appropriate medical home-like settings and conducting follow-up in the community as needed. In Project 2.3 (Care Maps) patients with specific high risk conditions will be provided a "map" for what they should expect before, during, and after a course of treatment. The Care Maps provide guidance regarding important questions to ask throughout the process, information regarding medications, and expectations for each stage of care. Both initiatives seek to empower typically-disenfranchised, low income patients by enhancing patient communication and providing tools that actively engage patients in a manner that is culturally and linguistically appropriate.

The second goal is addressed by Projects 1.2, 2.1, and 2.2. These projects are focused on care transitions with particular emphasis on Carney's significant elder population. Respectively, the proposed initiatives outline a strategy for engaging post-acute partners for cross continuum care coordination, the implementation of electronic medical records to enhance communication between acute and post-acute providers, and acute care setting education to improve awareness and knowledge regarding geriatric issues and early identification of complications. In conjunction, these initiatives will enable Carney to better manage the total cost and care of its patients, reduce complications, and implement the information technology infrastructure needed to perform under global risk-based payment arrangements.

[1] Graphic from Massachusetts Senior Care Association, http://www.maseniorcare.org/Policymakers/Financing.aspx

Project 3.1 represents the third goal and the culmination of Carney's efforts to engage patients and coordinate care along the entire health spectrum. Under this initiative, Carney will receive a "global budget" for the care of its Medicaid patient population. As part of this project, Steward will collaborate with Medicaid to develop a pilot program which leverages Carney's significant Medicaid patient population. Carney will strive to achieve specified benchmarks in care management, quality, and cost growth; and in the final year of the demonstration, will receive global, risk-based payments for the total projected cost of care for 100% of its aligned Medicaid population.

Finally, Project 3.2, a mandatory initiative to participate in a learning collaborative, will ensure that Steward is both actively sharing its experiences with other providers as well as continuing to implement best practices in its efforts to improve cross continuum tools for patients and providers. Steward will participate in the learning collaborative organized through the Pioneer program so it may both share with and learn from other providers who are similarly poised to transform into accountable care organizations.

Collectively, the seven selected DSTI projects support Carney's long-term vision to serve the Dorchester community as part of Steward's fully integrated, community-based health care system. As an entity, Carney faces unique challenges relative to the rest of the Steward system in engaging its diverse patient population. The proposed projects address this challenge, in addition to beginning to develop the post-acute partnerships necessary to integrate patient care over the entire continuum. With enhanced patient engagement and appropriate post-acute integration and infrastructure, Carney will be able to successfully manage Medicaid patients under global and/or shared savings-type arrangements as described in Project 3.1.

The table below summarizes the projects that will be addressed in this proposal. In addition to the proposed projects, Carney has also committed to reporting 18 "Category 4" measures related to population health over the demonstration period. These measures reflect not only some of the specific elements addressed in Carney's selected projects, but also twelve common measures of population health that may indicate if the proposed DSTI projects are influencing health system outcomes and quality of care. Carney's submission of Category 4 population health measures in years two and three of the demonstration reflect the broader influence Steward believes the selected projects will have in improving the health of Carney's patient population.

Project Title	**Description**	**Three Year Goals**
Category 1: Further Development of a Fully Integrated Delivery System		
1.1: Implement Patient Navigation Services	Implementation of bilingual community health workers	• Reduced use of ED as routine, primary site of care • Increased use of primary care and development of primary care relationships for ED frequent users
1.2: Develop Integrated Acute and Post-Acute Network Across the Continuum of Care	Implementation of nurse practitioners in post-acute care settings to enhance communication and care coordination between acute and post-acute settings	• Reduced hospitalizations from post-acute care settings • Improved care coordination and quality for SNF patients
Category 2: Improved Health Outcomes & Quality		

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Project Title	Description	Three Year Goals
2.1: Enhance Patient Transitions	Introduction and implementation of INTERACT II Transfer Tool	• 90% utilization in acute and post-acute care setting • Improved patient communication at discharge
2.2: Implement Process Improvement Methodologies to Improve Safety, Quality, and Efficiency	Implementation of NICHE Program	• ANCC certification of nurses • Improved nursing knowledge of geriatric care • Improved outcomes for elders
2.3: Reduce Variations in Care	Implement condition-specific clinical team Care Maps that describe the needed evidence-based care for patients throughout the care continuum	• Utilization of Clinical and Patient/Family Care Maps for high risk conditions • Reduce readmissions from high risk conditions • Improve core measure compliance for high risk conditions
Category 3: Ability to respond to statewide transformation to value-based purchasing and to accept alternatives to fee-for-service payments		
3.1: Implement Global Payment Arrangements	Implementation of Medicaid global payment pilot	• 100% of aligned Medicaid patient population covered under global payments
3.2: Participate in a Learning Collaborative	Actively participate in the Pioneer ACO learning collaborative	• Develop report of “lessons learned” from learning collaborative participation that have aided in the achievement of DSTI goals
Category 4: Population-Focused Improvements		
4.1	CTM-3	• Report measure in FY14
4.2	ED Wait Time: Door to Diagnostic Evaluation by a Qualified Medical Personnel (OP-20)	• Report measure in FY13 and FY14
4.3	Percent of patients who answer "Always" to the question: Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?	• Report measure in FY13 and FY14
4.4	Percent of patients who answer "Always" to the question: Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?	• Report measure in FY13 and FY14
4.5	Pneumonia Immunization	• Report measure in FY13 and FY14
4.6	Influenza Immunization	• Report measure in FY13 and FY14

Project Title	Description	Three Year Goals
4.7	Percent of discharged patients under age 75 who were hospitalized for Chronic Obstructive Pulmonary Disease	• Report measure in FY13 and FY14
4.8	Percent of discharged patients under age 75 hospitalized for Congestive Heart Failure	• Report measure in FY13 and FY14
4.9	AHRQ Low Birth Weight Rate: number of low birth weight infants per 100 births	• Report measure in FY13 and FY14
4.10	Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization for patients 18 and older (non-risk standardized, with CMS exclusions)	• Report measure in FY13 and FY14
4.11	Percent of Emergency Department visits for children age 18 or less with a primary diagnosis of asthma	• Report measure in FY13 and FY14
4.12	Percent of patients with elective vaginal deliveries or elective cesarean sections at greater than or equal to 37 weeks and less than 39 weeks of gestation completed	• Report measure in FY13 and FY14
4.13	Frequent User ED Visits	• Report measure in FY13 and FY14
4.14	Percent reduced hospital 30-day all-cause readmissions from prior year baseline	• Report measure in FY13 and FY14
4.15	HCAHPS Discharge Information	• Report measure in FY13 and FY14
4.16	Falls per thousand patient days	• Report measure in FY13 and FY14
4.17	30-day all-cause readmissions	• Report measure in FY13 and FY14
4.18	Percent of aligned patient population reimbursed under global payment arrangement	• Report measure in FY13 and FY14

Key Challenges

DSTI projects and metrics will help Carney Hospital address and monitor its progress regarding several key areas of specific interest. These areas includes communication within a diverse and multilingual community, improving care for a population older and more medically complex than the average Massachusetts hospital, and remaining viable with a location just outside the highly competitive Boston area. Collectively these

factors have resulted in significant challenges at Carney with engaging patients in their care; including communication regarding continuity of care, access and use for preventative care; as well as coordinating care, including post-acute transitions and keeping care local.

Background

Steward's History

Steward's journey toward clinical and financial integration of care began three years ago. Prior to 2008, Steward was known as Caritas Christi and consisted of six "siloed" community hospitals, each with separate governance models and operating and information technology systems that did not operate efficiently, or communicate across its delivery system.

Furthermore, Caritas Christi's physician network participated in minor value-based contracts that rewarded volume of services, as opposed to quality or cost performance. More than 95% of its covered lives and patient visits were contracted under fee-for-service. The contracting strategy was neither aligned with nor focused on managing cost or coordinating care. In addition, no functioning centralized management or leadership team existed to coordinate care or align system goals with patient outcomes. Little if any data was available to support care improvement efforts.

The Caritas Christi model was inefficient, ill-equipped to deliver patient-centered care and consisted of a disorganized group of hospitals with minimal operating cash and no long-term strategy. This unsustainable position presented an opportunity and a "burning platform" for leadership to take a comprehensive view of the hospitals and to re-invent and reform the Caritas administrative, operational, and delivery system from the bottom to the top.

In 2008, a new management team was established to lead Caritas Christi. The new leadership team has since implemented significant administrative, operational, and clinical reforms that include new performance goals, new governance rules and objectives, new organizational by-laws, as well as complete upgrading and alignment of the information technology systems. In addition, the new leadership team has improved the physician's experience of care delivery by providing electronic health records with electronic prescribing in the offices and computerized order entry in the hospitals. Broad administrative and employee reforms were also implemented across the Steward system.

Furthermore, new leadership was established at each hospital, and a swift transition was undertaken to grow risk-based contracts from 5% of commercial covered lives, to over 75% under global budget arrangements today. In a reflection of its progress over the past three years, in November 2011 Steward was selected by Medicare to serve as a Pioneer ACO.

Steward Carney Hospital

The above initiatives are part of the foundation upon which Steward seeks to implement Carney's proposed DSTI projects. Importantly, the DSTI program provides Steward with an opportunity to focus on goals unique to Carney Hospital. As a high volume Medicaid provider, Carney faces heightened challenges engaging patients as well as establishing continuity and coordination in care.

Carney Hospital has been providing comprehensive, high quality acute inpatient, outpatient, diagnostic, and specialty medical care to the working class community of Boston since 1863. The 159 bed safety net hospital serves a significant minority population and receives 74% of its patient revenue from government payers. Carney's culturally diverse patient population encompasses a significant variety of languages, including Spanish, Portuguese, Creole, Vietnamese, Cantonese, Mandarin, and Russian.

In addition, Carney's patient population is older and more medically complex than the average Massachusetts hospital, with patients over age 65 comprising approximately 50% of patients on medical and surgical floors. Carney has several board certified geriatricians and several primary care providers with geriatrics as a large proportion of their practice. Carney also offers a specialized geriatric behavioral health floor. Given the significant presence of elders in the surrounding community, Carney recently implemented a community-based Geriatric Center of Excellence. As a Geriatric Center of Excellence, Carney is focused on delivering integrated care management strategies for elders. Care integration programs will facilitate seamless care management across settings – non-acute, skilled nursing facilities, inpatient acute units, and outpatient programs. Care management initiatives will engage the health system at all levels, including specialists, physicians, nurses, teaching residents, and community centers.

Steward Transformative Work to Date

As part of the evolution to a fully integrated community care model, Steward has assessed gaps in systems, services, and achievement and disruptions in the care delivery model (e.g., poor health status for patients with chronic diseases, errors in care). Since 2008, Steward has identified certain gaps in care delivery that are the focus of performance improvement efforts. Based on these assessments, Steward has undertaken a multitude of clinical initiatives that drive care coordination and better care for patients. In addition, community benefits advisory councils, present in each Steward hospital, study the needs of the local community, develop community benefits plans to address the needs, measure outcomes, and file an annual progress report. These reports also serve to assess root causes and provide a baseline for the development of transformative initiatives. The following sample of initiatives from the past couple years illustrates Steward's strategy to drive quality, safety, better patient experience and coordinated care across Steward's diverse continuum.

- Steward's work in diabetes has led to recognition by the American Diabetes Association for quality diabetes self management education programs, and Steward continuously partners with schools, municipalities, and local diabetes coalitions. Steward has also tried innovative approaches to improve the aptitude for self care of diabetes by developing videos of real families living and coping with diabetes in both Spanish and English, and conducting educational demonstrations of healthy cooking in partnership with local chefs.

- Steward has partnered with statewide "Mass in Motion" collaboratives which bring a myriad of community based groups, local businesses, public health officials, and community members together to address the social determinants of health, including local ordinances and the built environment.

- In communities, Steward is often the largest employer and consequently recognizes the importance of creating healthy work environments as a way to improve the health of its communities. Toward this end, Steward has established Sugar Sweetened Beverage (SSB) reduction programs that have greatly reduced, and in some cases eliminated, the sale and consumption of SSB's in Steward facilities. Steward has enacted smoke free hospital campuses in some of its facilities and greatly increased smoking cessation programs for employees and community members.

- Patient feedback from HCAHPS and Massachusetts Health Quality Partners' bi-annual survey of patient experience in the ambulatory setting guides improvement initiatives. In one Steward facility, investigation of variation in responses revealed that spouse-completed responses rated care 5-16% lower than patient-completed responses on HCAHPS measures. That finding triggered the 'Year of the Family' initiative whereby, with input from the hospital Patient and Family Advisory Council, processes in every

department were redesigned to better integrate spouses and families into care. Changes included implementation of an array of family educational forums including family members in the teach back sessions and in written discharge materials, creating a family room, encouraging a family member to accompany a patient to procedures, removal of STOP signs from ICU doors, and senior leader rounding on at least one family each week. As a result, within a year, seven of ten HCAHPS measures improved to the 75th percentile or above.

- The cultural, educational and socioeconomic diversity of Steward communities pose particular challenges. Languages include Russian, Spanish, Portuguese, Cape Verdean Creole, Haitian Creole, Mandarin, Vietnamese, Khmer, and Arabic, among others. A gap analysis last year led to a complete overhaul of interpreter services across the system. Today hospital requests for interpreters are triaged through a Service Hub which insures availability of interpreter services within ten minutes of request. Services are provided through an in-person interpreter, or by a rolling portable phone or by remote video interpreting for the deaf as well as spoken languages. In one hospital, an interpreter phone is available in every room where the patient chooses from eight languages. Services are also provided in physician offices. Patients are provided with ID cards that say "Please Call an Interpreter, I speak Russian" and include their name and medical record number and birth date. Patients also receive cards with pictures that illustrate common needs and topics—hungry, shower, water, television etc., which help patients who cannot read. Group education sessions for bariatric services (and group therapy) are outfitted with simultaneous translation headphones.

- Over the past 18 months Steward hospitals have been actively participating in the Institute for Healthcare Improvement's STAAR initiative (State Action on Avoidable Re-hospitalizations) to improve transitions in care and reduce avoidable readmissions. As a member of the Steward system, Carney has aggressively participated in reducing readmissions and is actively working toward increasing patient satisfaction in care transitions. Through this initiative, overall all-cause readmission rates at Carney have been reduced from 14.7% in FY2010 to 14.0% in FY2011. Work through this program has laid the foundation upon which many of the proposed DSTI projects build, such as root cause analyses and the establishment of baseline data for certain key metrics.

- Additionally, over the past couple of years Carney has implemented patient education materials, the utilization of the "teach back" methodology for both patient and caregivers throughout patient stays, patient friendly care plans, and enhanced community provider involvement. Inpatient bed huddles, patient ambassador rounds by senior managers, multidisciplinary rounds, and Emergency Department "flash rounds" have all been instituted over the past year and have created real-time alignment and communication among clinical team members and focused protocols for improving transitions throughout the continuum.

- In addition to the aforementioned initiatives, the commitment from relevant community stakeholders to achieve seamless care is reflected in Steward's development of cross continuum councils and collaborative care committees to better address the needs of those patients who are readmitted to the hospitals and patients who inordinately utilize Steward emergency rooms. For avoidable readmissions, the team based care includes a collaboration of the hospitals, homecare, skilled nursing facilities, elder services, and care givers who partner to coordinate care across Steward organizations. For unnecessary and inordinate emergency room usage, Steward has worked with community stakeholders to strengthen and coordinate the myriad of community based support services available to the most vulnerable patients through a committee comprised of hospital administrators and representatives of different community agencies and health centers.

Related Federal Initiatives

In addition to participating in the DSTI program, Steward is part of or pursuing the following federal initiatives:

- **Medicare Pioneer ACO**: One of 32 Pioneer ACOs across the United States; 37,000 beneficiaries currently aligned with Steward PCPs
- **Community Based Care Transitions (section 3026):** Two Steward hospitals (Steward Holy Family Hospital and Merrimack Valley Hospital) partnered with Elder Services of Merrimack Valley in CMS pilot to reduce preventable readmissions; Steward system-wide "Transitions In Care" team dedicated to actively monitoring care transitions and reducing preventable readmissions
- **State Action on Avoidable Re-hospitalizations (STAAR):** Steward is an active participant in Institute for Healthcare Improvement's multi-state initiative to reduce avoidable readmissions; partnering with skilled nursing facilities, home health agencies, ambulatory practices, patients, and caregivers

Proposed DSTI projects complement, but do not duplicate, ongoing efforts with federal initiatives. As a Pioneer ACO, Steward is under risk-based arrangements for its aligned Medicare beneficiaries. In contrast, Steward proposes global risk-based payment for distinct state-sponsored low income population(s) in Project 3.1. Additionally, while members of the Steward system are involved in the Community Based Care Transitions program, resulting in system-wide efforts to reduce readmissions, Carney is not a direct participant and receives no funding through that particular initiative. Finally, Carney also receives no funding as a result of involvement in the STAAR initiative.

Carney will provide updates on participation in any new HHS-funded initiatives related to DSTI projects in its biannual progress reports to be submitted to the Commonwealth.

Vision for Transformation

Over the next three to five years, Steward is hoping to transform into a fully integrated accountable care organization at risk for the care of virtually all of its patients. Today Steward is making critical investments in infrastructure, including the projects developed in response to the DSTI program. Over the next several years Steward will leverage these improvements to enhance its care coordination ability and more effectively manage utilization of health care services. Steward will also focus on efforts to engage its local communities both regarding health care and population health.

Steward anticipates specific transformation for Carney into a coordinated hub of care in the Dorchester community. Today, Carney struggles in a highly competitive market, in which the majority of patients are referred or migrate into Boston academic teaching centers for routine care. In becoming an accountable care organization, Carney will be better positioned to maintain routine care in its high quality, lower cost setting, and will realize enhanced sustainability as a high volume safety net provider, while improving care coordination and patient outcomes.

Category 1: Further Development of a Fully Integrated Delivery System

Project 1.1: Implement Patient Navigation Services
Master Plan Project 1.6

Goal: The goal of the proposed project is to utilize bilingual community health workers (CHWs) operating as patient navigators alongside a robust community collaborative to provide enhanced social support and culturally competent care to vulnerable and high risk patients in order to reduce preventable emergency department's visits and enhance primary care usage. This will be accomplished through the training and hiring of CHWs across the continuum of care and a broad cross sector community collaborative focused on addressing the social determinants of health. CHWs will interface with patients entering the hospital through the Emergency Department and serve as navigators for those patients to get linked in to regular primary and preventative care. This project will also inform a broader strategy to create a health care system that engages with patients in a more culturally competent manner, resulting in higher patient satisfaction and appropriate use of medical services.

Rationale: Similar to trends across the country and across the state of Massachusetts, the clinical staff at Carney does not demographically reflect the patients they serve. Carney patients are generally from multi-cultural backgrounds and are culturally diverse. Many speak a language other than English as their primary language. The Institute of Medicine's (IOM) landmark report: *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* (1999) found that a consistent body of research demonstrates health disparities between white patients and minority patients including significant variation in the rates of medical procedures by race, even when insurance status, income, age, and severity of conditions are comparable. This research indicates that U.S. racial and ethnic minorities are less likely to receive routine medical procedures and experience a lower quality of health services. Among several recommendations to address this issue, the IOM recommends more minority health care providers and improved cultural competency. The literature suggests that employing culturally competent community health workers to serve as bridges between hard-to-reach and disenfranchised communities can improve patient experiences,[2] quality of care,[3] decrease medical expenditures,[4] and improve health outcomes.[5] The use of CHWs will provide Carney the flexibility to meet patients in settings beyond the hospital, making it easier to coordinate patient care and ensure they are following up on appointments, medications, and primary care. This type of proactive outreach is critical to Carney's diverse patient population, in which cultural barriers frequently result in inappropriate ED utilization and lack of primary care.

[2] Felix-Aaron K, Hill MN, Rubin HR. *Randomized trial of nurse practitioner-community health worker intervention: Impact on young black men's satisfaction with high blood pressure care*. Abstr Acad Health Serv Res Health Policy Meet. 2000;17

[3] Barnes-Boyd C, Fordham NK, Nacion KW. *Promoting infant health through home visiting by a nurse-managed community worker team.* Public Health Nursing. 2001;18(4):225-235.

[4] National Community Voices Initiative, Northern Manhattan Community Voices. *Financing community health workers: why and how: Policy Brief.* 2007. Morehouse School of Medicine and Community University Center for Community Health Partnerships.

[5] Barnes-Boyd C, Fordham NK, Nacion KW. *Promoting infant health through home visiting by a nurse-managed community worker team*. Public Health Nursing. 2001;18(4):225-235.

Program Description: Carney has developed its community health worker program based on the best practices identified in the Massachusetts Department of Public Health's 2009 report to the state legislature *Community Health Workers in Massachusetts: Improving Health Care and Public Health*.[6]

Carney will hire community health workers (CHWs), some dedicated to identifying unnecessary emergency department use and others dedicated to connecting patients to primary care.[7] The emergency department community health workers will focus on identifying emergency department patients who meet the criteria to receive navigation services. ED patients who meet at least one of the following criteria will be navigated: 1) uninsured, 2) six or more visits to the ED in one year, 3) without a PCP. The goal of the ED CHWs will be to connect patients to primary care providers at community health centers and within the Steward Health Care network. In addition, the ED community health workers will work to successfully enroll patients in the appropriate health insurance program (MassHealth, Commonwealth Care, etc.) in a timely manner. Although ED CHWs will identify navigation patients in emergency departments, they will have the flexibility to make home visits or meet patients in community settings to ensure patients complete insurance paperwork and are connected to a suitable medical home. Frequent ED users will be tracked and identified using Microsoft Amalga technology.

Once a medical home has been identified by the ED community health worker, the ED CHW will transition the patient to a primary care CHW. At this point, the primary care CHW will complete an assessment with the patient that assesses barriers to care, age-appropriate health screenings, and chronic disease management needs. Patients who did not enter the system through the emergency department but are in need of navigation will also be eligible for this service if they meet eligibility criteria. Primary care patients will be navigated if they meet at least one of the following criteria: 1) they have missed at least two appointments within one year; 2) they have barriers to care such as limited English proficiency, transportation, or family care responsibilities; or 3) they require chronic disease maintenance. Patients with chronic diseases will be case managed at the medical home site and will be referred to Chronic Disease Self Management (CDSMP) classes led by a primary care community health worker. Patients will continue to receive patient navigation services until they no longer meet the navigation criteria.

Steward has an ED community health worker pilot currently underway at Holy Family Hospital in Methuen, Massachusetts. In this pilot, the CHW keeps case notes in patient records and reports milestones such as "MassHealth paperwork work complete" and "claims paid" in a database. The English/Spanish bilingual CHW at Holy Family Hospital was hired in December 2011, trained in MassHealth and the virtual gateway throughout January 2012 and began working with patients the following month. Over the course of approximately five weeks (February 1 – March 8), the CHW has contacted 65% of the 119 patients assigned to her by the Patient Access Department. Among those patients with whom she had contact, she has successfully connected 40% (n = 31) of them to a regular source of health insurance coverage.

The same process tracking systems will be implemented at Carney Hospital. Additionally, Steward will track the number of patients who are successfully transitioned to a primary care medical home. Navigated patients who enter the continuum of care through the emergency department will be asked to complete a standardized patient satisfaction survey.

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[6] The full report can be found at: http://www.mass.gov/eohhs/provider/guidelines-resources/services-planning/workforce-development/comm-health-wkrs/community-health-worker-investigation-and-report.html

[7] The specific number of CHWs will be determined following completion of a needs assessment to be conducted in FY2012.

Primary care CHWs will be tracked by the barrier assessments they complete, action plans they develop including community resources to which they refer patients, case notes in the patient record, and chronic disease self management sessions they hold. Steward will also monitor appointment attendance among navigated patients with the goal of reducing no-show rates. Patients receiving navigation services in primary care settings will be tracked through their initial and annual barrier assessment, their electronic medical record, and the chronic disease self management database.

Steward Health Care System will partner with the Outreach Worker Training Institute (OWTI) located at Central Massachusetts Area Health Education Center (CMAHEC) and the Massachusetts Association of Community Health Workers (MACHW). Upon employment, all new community health workers will attend an intensive 24-hour training led by OWTI to learn the core competencies of community health work including: communication, organization, assessment, documentation, service coordination and cultural competency. Emergency department CHWs will receive additional training that includes units on Medicaid enrollment, using the Virtual Gateway, mental health and substance abuse. Beyond the core training, primary care CHWs will be trained in chronic disease and age-appropriate screenings, motivational interviewing, and chronic disease self-management.

Throughout the core competency training, CHWs will work on creating a system and community resource guide. Additionally, this initiative will leverage existing relationships with community partners to ensure CHWs have knowledge of and relationships with diverse system and community resources. Carney has a Community Benefits Advisory Council (CBAC) which is comprised of members of local community groups, non-profits and social service agencies. Through community health assessments, the CBAC determines unmet community needs and develops community benefits programs to address these needs. The CBAC will serve as a resource to direct CHWs to appropriate community services.

Community health workers will represent the races, ethnicities, cultures, and languages of the communities that Carney serves. CHWs will receive cultural competency education as part of their core competency training to ensure that services are provided in a culturally and linguistically appropriate manner.

Expected Results: The proposed initiative will reduce unnecessary ED use, increase primary and preventative care, and increase patient satisfaction with care. More broadly, this initiative will enhance the health of the community by emphasizing primary and preventative care and establishing primary care relationships.

Related Projects:

- Project 2.3
- Project 3.1
- Project 3.2

This project addresses Carney's goal of better serving its culturally diverse patients across the health care continuum. In addition to utilizing bilingual, culturally competent community health workers as described above, Steward is also implementing Clinical and Patient/Family Care Maps. Both initiatives are designed to guide certain vulnerable populations through the care continuum and ensure that they are empowered to seek and access the care they need at the right time, in the right setting. In Project 1.1 community health workers will interact directly with patients and facilitate use of primary care by connecting patients to appropriate medical home-like settings and conducting follow-up in the community as needed. In Project 2.3 (Care Maps) patients with specific high risk conditions will be provided a "map" for what they should expect before, during, and after a course of treatment. The Care Maps provide guidance regarding important questions to ask throughout the process, information regarding medications, and expectations for each stage

of care. Both initiatives seek to empower typically-disenfranchised, low income patients by enhancing patient communication and providing tools that actively engage patients in a manner that is culturally and linguistically appropriate.

Project 3.1 represents the third goal and the culmination of Carney's efforts to engage patients and coordinate care along the entire health spectrum. Under this initiative, Carney will receive a "global budget" for the care of its Medicaid patient population. As part of this project, Steward will collaborate with Medicaid to develop a pilot program which leverages Carney's significant Medicaid patient population. Carney will strive to achieve specified benchmarks in care management, quality, and cost growth; and in the final year of the demonstration, will receive global, risk-based payments for the total projected cost of care for 100% of its aligned Medicaid population.

Finally, Project 3.2, a mandatory initiative to participate in a learning collaborative, will ensure that Steward is both actively sharing its experiences with other providers as well as continuing to implement best practices in its efforts to improve cross continuum tools for patients and providers.

Project 1.1: Implement Patient Navigation Services Master Plan Project 1.6		
SFY 2012	**SFY 2013**	**SFY 2014**
1.1.1 (Process 6-b1) **Milestone:** Identify skill set of personnel, and number of FTEs needed **Metric:** Completed Job Description with identified skills **Data Source:** Operations		
1.1.2 (Process 5-b3) **Milestone:** Conduct gap analysis **(**Current State Process Map Development[8]) **Metric:** Gap analysis completion (Creation of a Current State Process Map describing gaps and barriers) **Data Source:** Operations		
1.1.3 (Process 13-b1) **Milestone:** Creation of a Future State Process Map mitigating gaps and barriers, and ensuring proper standard practices. **Metric:** Future State Process Map Completed **Data Source:** Operations		
1.1.4 (Process 8-b1-b2)	**1.1.4** (Process 8-b1-b2) **Milestone:** CHW training completion **Metric: (Process 8-b1)** 100% of newly	

[8] A current state process map is a map of current processes used to identify gaps and opportunities for improvement; it is a type of gap analysis.

Project 1.1: Implement Patient Navigation Services Master Plan Project 1.6		
SFY 2012	**SFY 2013**	**SFY 2014**
	hired CHWs completed required Core training **Data Source:** participant registration database **Milestone: (Process 8-b2)** CHW training knowledge and self-efficacy **Metric:** 100% of CHWs improved knowledge and self-efficacy scores from Core pre to post-test **Data Source**: pre and post-tests	
1.1.5 (Process 9-b1-b2)		**1.1.5** (Process 9-b1-b2) **Milestone:** CHW training / continuing education training completion **Metric: (Process 9-b1)** 100% of CHWs will have completed the required continuing education training **Data Source:** participant registration database **Milestone:** CHW continuing education / evaluation knowledge and self-efficacy **Metric: (Process 9-b2)** 100% of CHWs improved knowledge scores related to continuing education training and self-efficacy from pre to post-test **Data Source**: pre and post-tests
1.1.6 (Process 12-b1)	**1.1.6** (Process 12-b1) **Milestone:** ED Frequent User Visits Identification **Metric:** Identification of baseline for top 25 frequent users (frequent users defined as patients that visit more than 12 times a year) to be referred to as "Cohort 1"[9] **Data Source:** Meditech, Amalga (internal sources)	**1.1.6** (Process 12-b1) **Milestone:** ED Frequent User Visits Identification **Metric:** New non-duplicative identification of top 25 frequent users (frequent users defined as patients that visit more than 12 times a year) to be referred to as "Cohort 2" **Data Source:** Meditech, Amalga (internal sources)

[9] Cohort 1 and Cohort 2 are populations identified for the purpose of monitoring most frequent ED users for improvement. Cohort 1 is the top 25 frequent users (frequent users defined as patients that visit more than 12 times a year) as identified in FY2013; Cohort 2 is a non-duplicative population identified using same criteria in FY2014.

Project 1.1: Implement Patient Navigation Services Master Plan Project 1.6		
SFY 2012	**SFY 2013**	**SFY 2014**
1.1.7 (Improvement 3-b1)		**1.1.7** (Improvement 3-b1) **Milestone:** ED Frequent User Visits Improvement[10] (num: total number of ED visits by persons classified as frequent ED users ("Cohort 1") in FY2013; denom: total number of ED visits by Cohort 1 in FY2014) **Metric:** 10% Reduction in Cohort 1 frequent user total visits from baseline identified in previous FY (frequent users defined as patients that visit more than 12 times a year) **Data Source:** Meditech, Amalga (internal sources)
1.1.8 (Process 10-b1)	**1.1.8** (Process 10-b1) **Milestone:** Develop process for making patient referrals to PCPs **Metric:** Completion of ED patient referral policy **Data Source:** Meditech, Amalga	
1.1.9 (Improvement 1-b1)		**1.1.9** (Improvement 1-b1) **Milestone:** PCP appointments made from ED (num: patients discharged from ED with PCP appt made; denom: all ED patients eligible for CHW services) **Metric:** 25% of discharged ED patients in program leave with primary care appointment made **Data Source:** Meditech, Amalga
1.1.10 (Process 2-b1)	**1.1.10** (Process 2-b1) **Milestone:** Provide navigation services and establish baseline for number of individuals targeted for services (ED patients who are uninsured; have six or more visits to the ED in one year, or no PCP without a PCP; and primary care patients missing at least two appointments within one year; limited English proficiency, transportation, or family care responsibilities; or requiring chronic disease maintenance) **Metric:** Percent of Identified Target Population receiving CHW Services (num:	**1.1.10** (Process 2-b1) **Milestone:** Monitor number of target individuals receiving services **Metric:** Number of Identified Target Population receiving CHW Services (num: number of individuals receiving CHW services; denom: number of individuals identified as meeting criteria for navigation services) **Data Source:** Amalga, CHW records

[10] Frequent users defined as patients that visit the ED more than 12 times over 12 month period. Measures based on number of visits by persons classified as frequent users in prior FY compared to number of visits by that same cohort in following year.

Project 1.1: Implement Patient Navigation Services Master Plan Project 1.6		
SFY 2012	**SFY 2013**	**SFY 2014**
	number of individuals receiving CHW services; denom: number of individuals identified as meeting criteria for navigation services) **Data Source:** Amalga	

Project 1.2: Develop Integrated Acute and Post-Acute Network Across the Continuum of Care
Master Plan Project 1.7

Goal: The goal of this initiative is to reduce readmissions and hospitalizations for patients in post-acute settings, as well as to bring the post-acute setting into Carney's integrated care continuum. This project will achieve this through the development of integrative partnerships with local skilled nursing facilities. Carney will deploy nurse practitioners to skilled nursing facilities in the Carney service area that will serve as transitional care experts and work in collaboration with board certified geriatricians at Carney. The expanded availability of nurse practitioners in skilled nursing facilities will reduce hospitalizations by eliminating emergency room evaluations in favor of on-site evaluations and ensuring care is provided in the most effective setting. The relationships established through this initiative will enhance integration along the care continuum, and in the future will allow Carney to function as the hub for a single global payment and accountable care entity.

Rationale: Reports from the Massachusetts Division of Health Care Finance and Policy estimate that as many as 46% of visits to Massachusetts acute hospital emergency departments are avoidable / preventable. Literature suggests this figure may be as high as 67% for patients admitted from skilled nursing facilities.[11] Unnecessary trips to the emergency room are not only costly to the Commonwealth; they also increase the risk of complications by exposing vulnerable patients to illness and errors in transitional care. Given Medicaid's dominance as a payer for nursing home services, this initiative may provide important savings to MassHealth, the Massachusetts Medicaid program. Additionally, investment in post-acute provider relationships will aid Carney as it seeks to become a fully integrated community care organization. This project will aid a critical segment of Carney's patient population, and aligns with recent investments made in Carney's geriatric center.

Program Description: The proposed program will place nurse practitioners into skilled nursing facilities in Carney's service area that will serve as transitional care experts and work in collaboration with three board certified geriatricians at Carney. At the current time, Carney Hospital has strong relations with seven skilled nursing facilities; Boston Home, Bostonian, Braintree Manor, Harborlights, Marina Bay, Marion Manor, and Saint Joseph. These seven facilities provide care to approximately 350 patients in total, the majority of which are covered by Medicaid. Carney nurse practitioners have been assigned to five of the seven facilities and the remaining two facilities each employ their own nurse practitioner.[12] Each Carney nurse practitioner is supported by a Carney attending physician. The emphasis of the Carney teams at skilled nursing facilities has been to provide optimal care in non-acute settings and prevent readmissions from non-acute to acute facilities.

Over the past six months Carney has initiated post-acute transition group meetings with the affiliated nursing homes. The purpose of the meeting is to review Carney's acute care hand-offs; readmission data and to better acquaint the various clinical and administrative participants with each other. Participants of these meetings "drill down" on events leading to patient readmissions within 30 days of discharge. This allows all post acute-care partners to have live discussions and participate in corrective plans of action. Patient readmissions from skilled nursing facilities are also reviewed by case management to see what both the hospital and the skilled nursing facility could have done to keep that patient in the facility. The proposed program builds from this foundation to more fully coordinate care transitions to and from skilled nursing

[11] Joseph G. Ouslander et al., *Potentially Avoidable Hospitalizations of Nursing Home Residents*, J Am Geriatr Soc 58:627–635, 2010.
[12] The remaining two facilities have physician supervision and direction associated with Carney

facilities. In addition, this program will supplement current efforts by Steward's cross continuum Transitions in Care team by implementing this pilot initiative and acting directly upon analyses indicating gaps in post-acute care. While all community facilities are invited to participate in our cross continuum Transition in Care live discussions and analysis, the proposed DSTI effort focuses specifically on transitions between skilled nursing facilities and the hospital. The proposed initiative also expands upon prior efforts by introducing a tool which requires cooperation between both parties involved in the transition, as opposed to a single-sided effort.

This project will also leverage Carney's DSTI efforts to implement the INTERACT transfer tool (Project 2.2), which standardizes vital health information as patients are transferred to and from the acute and post-acute setting. In order to ensure that nurse practitioners are integrated in a meaningful manner, EClinical will be utilized to record patient information in partner skilled nursing facilities. As part of this initiative Carney's skilled nursing facility-based NPs will document patient progress notes on EClinical EMR. This will allow the covering physician and others involved in patient care such as specialists to communicate and follow the patient along a single electronic record. This will also facilitate after-hours communication with "on call" staff.

The use of EClinical to enhance communication between the acute and post-acute setting will allow Carney clinical staff to remotely access records of patients in transition. Carney ER staff as well as acute care staff may also have access to skilled nursing facility EMR. There are many limitations to a fully integrated EMR with the post-acute community. Of the seven area skilled nursing homes in which Carney physicians and NPs practice, most utilize different EMR systems or have partial paper and electronic charts. Uniform and consistent access to a patient's EMR along the care continuum will decrease duplication of tests and enhance and improve the transition process for these patients.

In order to evaluate the success of this program, a multidisciplinary cross continuum team will look at 30 day readmissions as well as admissions from affiliate skilled nursing facility partners. In addition, specific goals have been established to measure improvement in readmissions from post-acute care settings. Carney will continue to monitor the performance of local skilled nursing facilities to ensure that its skilled nursing facility partners improve and/or remain above a threshold in quality rankings as posted on the *Nursing Home Compare* website. Evaluations will be conducted annually and used to work with skilled nursing facilities to develop targeted improvement strategies as needed. In addition, Carney may expand the number of skilled nursing facility partners based on evidence of high quality facilities in the area and mutual interest. Success in the proposed project may result in the expansion of this program to other Steward acute care hospital service areas.

Expected Results: It is expected that the proposed project will reduce hospitalizations and re-hospitalizations of nursing home patients over the demonstration period. This in turn will translate into a 5% reduction each year in projected readmissions as compared to the prior fiscal year (FY).[13]

Related Projects:

- Project 2.1
- Project 2.2
- Project 3.1
- Project 3.2

[13] All targets in this DSTI proposal are based on the more aggressive of Carney's specific position or Steward's specific position.

This project builds upon Steward system-wide accomplishments and seeks to maximize care coordination with post-acute care providers, including mitigating preventable readmissions, and standardizing care processes. This project, in conjunction with Projects 2.1 and 2.2, focuses on care transitions with particular emphasis on Carney's significant elder population. While Project 1.2 engages post-acute partners directly, these efforts are enhanced by Carney's other DSTI projects which seek to implement electronic medical records, and educate acute care staff regarding geriatric issues and early identification of complications. In conjunction, these initiatives will enable Carney to better manage the total cost and care of its patients, reduce complications, and implement the information technology infrastructure needed to perform under global risk-based payment arrangements, as described in Project 3.1.

Finally, Project 3.2, a mandatory initiative to participate in a learning collaborative, will ensure that Steward is both actively sharing its experiences with other providers as well as continuing to implement best practices in its efforts to improve cross continuum tools for patients and providers.

Project 1.2: Develop Integrated Acute and Post-Acute Network Across the Continuum of Care Master Plan Project 1.7		
SFY 2012	**SFY 2013**	**SFY 2014**
1.2.1 (Process 3-b1) **Milestone:** Execute agreement with post-acute partners **Metric:** Agreements with at least 7 post-acute partners **Data Source:** agreement		
1.2.2 (Improvement 4-b1)	**1.2.2** (Improvement 4-b1) **Milestone:** Identify barriers to use of EMR in nursing home **Metric:** Report of identified barriers for EMR **Data Source:** internal records	
1.2.3 (Process 5-b1)		**1.2.3** (Process 5-b1) **Milestone:** Implementation of EMR in nursing homes **Metric:** technical implementation (wiring) in all nursing home sites **Data Source:** internal records
1.2.4 (Improvement 2-b2) **Milestone:** Reduction of readmission from Nursing Homes (num: patients discharged to partner SNF after index admission and readmitted within 30 days; denom: all patients discharged to SNF after index admission)[14] **Metric:** Reduce all-cause readmissions	**1.2.4** (Improvement 2-b2) **Milestone:** Reduction of readmission from Nursing Homes (num: patients discharged to partner SNF after index admission and readmitted within 30 days; denom: all patients discharged to SNF after index admission) **Metric:** Reduce all-cause readmissions from	**1.2.4** (Improvement 2-b2) **Milestone:** Reduction of readmission from Nursing Homes (num: patients discharged to partner SNF after index admission and readmitted within 30 days; denom: all patients discharged to SNF after index admission) **Metric:** Reduce all-cause readmissions

[14] Readmissions calculation follows FY2012 final rule specifications.

Project 1.2: Develop Integrated Acute and Post-Acute Network Across the Continuum of Care Master Plan Project 1.7		
SFY 2012	**SFY 2013**	**SFY 2014**
from nursing homes to Carney by 2% from previous FY (Baseline FY11 18.8%, reduction to 18.4% in FY2012) **Data Source:** University Healthcare Consortium (UHC) (internal source)	nursing homes to Carney by 5% from previous FY **Data Source:** University Healthcare Consortium (UHC) (internal source)	from nursing homes to Carney by 5% from previous FY **Data Source:** University Healthcare Consortium (UHC) (internal source)

Category 2 – Improved Health Outcomes & Quality

Project 2.1: Enhance Patient Transitions

Master Plan Project 2.3

Goal: The goal of this project is to enhance communication throughout the discharge process from non-acute to acute care settings, and vice versa, to prepare for value-based purchasing programs which will evaluate providers on the basis of care coordination and outcomes. This is an attempt to involve all stakeholders involved in discharge and transitions between health care settings. Enhanced discharge communication will be achieved through implementation and use of the INTERACT Transfer Tools (Interventions to Reduce Acute Care Transfers)[15], bed huddles, Emergency Department huddles, multidisciplinary rounds, and Carney's Ambassador program (see description below). These activities support a comprehensive discharge process by allowing participants in a variety of settings to contribute to the process and communicate in a standardized manner. Key goals of this project include identification of barriers in communication within and across settings and education of all acute care staff and partner post-acute providers in standard utilization of the transfer tools.

Rationale: Approximately 30,000 patients pass through Carney's Emergency Department each year, many of which arrive from one of Carney's seven post-acute partner facilities. Carney recognizes that communication and coordination among settings is imperative to maintaining high quality along the care continuum and preparing for value and outcome-driven payment arrangements. This initiative targets increased utilization of the INTERACT transfer tools to aid in communication and care coordination among care settings. The INTERACT tools have been shown to improve communication between nursing homes and hospitals and reduce the frequency of potentially avoidable transfers to acute hospitals from non-acute settings.[16] Enhanced communication reduces the number of complications from hospitalization, as well as unnecessary health care expenditures. Additionally, within the acute care setting, Emergency Department huddles, bed huddles and multidisciplinary rounds will improve communication internally and ensure clear flow of patient information. As a whole, these programs support an efficient and patient-centric care transitions within and among providers that will help reduce the total cost of care for patients who may be associated with Carney under alternative payment arrangements.

Program Description: INTERACT tools are screening tools for non-acute facilities. They are designed to aid in early identification, assessment, documentation, and communication regarding changes in patient status. The INTERACT tools will aid in assessing and communicating patient needs and changes in patient condition to covering physician. Please see Attachment A for an example of the INTERACT form.

The INTERACT transfer tool will be used to standardize the information sent from nursing homes or post-acute providers to Carney. This will allow Carney acute care staff to record and access pertinent patient information in a uniform manner. Carney will work with local nursing homes to establish partnerships and encourage the use of INTERACT tools in the post-acute setting. Efforts will be made to engage the same post-acute partners as Project 1.2 in order to leverage associated work performed under that initiative.[17] For the first year, Carney has established the goal of initiating formal monthly meetings with post-acute partners to identify barriers to use of the INTERACT transfer tool. By leveraging post-acute partners from other projects, Carney will be able to expedite integration of the INTERACT form into its electronic medical records. The form will have a designated placement in medical record with a plan to move towards integration in the EMR in the future.

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[15] See http://interact2.net/ for more information.

[16] Health Research and Education Trust, in partnership with AHA, *Health Care Leader Action Guide to Reduce Avoidable Readmissions*, January 2010.

[17] See subsection "Related Projects" for more information.

A key measure of success over the demonstration period will be appropriate utilization of the INTERACT Transfer tool. Carney will collaborate with post-acute partner facilities to train their staff in the use of the INTERACT tool and work with post-acute facilities to identify and overcome barriers to use. In following years, Carney will aim for 90% utilization of INTERACT in both acute and non-acute settings. Use of INTERACT will be supplemented by efforts to streamline and improve communication within Carney. The use of the INTERACT transfer tool to standardize and personalize key patient information between care settings is essential to properly manage the care, as well as cost of care, for medically complex patients who may undergo multiple transitions.

INTERACT tool utilization, as well as Emergency Department huddles, multidisciplinary rounds, and Carney's Ambassador program, and build from Carney's work to date on the STAAR Initiative (State Action on Avoidable Re-hospitalizations) and support Carney's broad strategy of improving communication across settings and identifying patient needs to prevent re-hospitalization. The STAAR initiative is focused on improving care transitions and requires the formation of "transitions" care teams that engage not only hospital staff, but representatives from skilled nursing facilities, home health agencies, as well as patients and caregivers. From this initiative, Carney has already completed root cause analysis type work that now serves as the foundation for implementing internal communication efforts.

ED and bed huddles and multidisciplinary rounds will be used to plan personalized transitions in care both within the hospital and from the hospital. Additionally, Carney will be rolling out an "Ambassador program" in which senior leaders visit all patients on a daily basis. This program will allow senior leadership to observe clinical elements, communication processes, and patient/family satisfaction "in action." The program will also help hospital leadership understand from a patient's view what is necessary for improving patient care and allow for a shorter, more personalized hospital stay.

Currently Carney ED and nursing floor staff are not familiar with the INTERACT forms. Carney also lacks a standardized system for recording transfer information in patient medical records. Effectiveness of the INTERACT tool and internal process changes will be measured by monitoring readmissions as well as the timeliness of communication and "right site" for patients requiring care transfers. Over the demonstration period Carney is aiming to increase utilization of area nursing homes using INTERACT tools, increase utilization of acute care staff using the tool, and decrease unnecessary admissions.

Use of the INTERACT transfer tool as well as huddles, multidisciplinary rounds, and the Ambassador program will collectively create a more patient-centric and standardized means of discharging and transferring patients to the most appropriate site of care. The proposed project will enable Carney to more effectively manage its patient population by ensuring pertinent information is transferred and understood by providers in other settings. These standardizing protocols will reduce duplicative and unnecessary care while enhancing patient outcomes and satisfaction. Patient satisfaction will be specifically measured by HCAHPS survey questions regarding communication with doctors, nurses, and regarding discharge information. Efforts will be made to conduct surveys in close temporal proximity to provision of care to most accurately measure the impact. Streamlined communication both between providers and within the hospital will allow Carney to perform more effectively under value-driven and outcome-based paradigms.

How Project Will Refine Innovations, Test, and Disseminate Findings: This project will test and refine a set of innovations designed to improve transitions in care INTERACT Transfer Tools, bed huddles, Emergency Department huddles, multidisciplinary rounds, and Carney's Ambassador program. The project will enhance the effectiveness of each innovation by addressing transitions from multiple angles. For instance, rather than only addressing communication with post-acute providers, the proposed project incorporates processes that will ensure comprehensive communication during transitions both within the acute care setting as well as from the

acute to post-acute setting. Findings will be disseminated throughout the Steward system, with similar initiatives likely to be implemented in other Steward acute care hospitals depending upon the extent of success. Additionally, broader dissemination will occur through Steward's Transitions in Care team, a group including several post-acute providers and external stakeholders that meets monthly to discuss patient transitions as well as through the regular progress reports required as part of the DSTI program.

Expected Results: This initiative will improve communication throughout the patient transfer and discharge process. The proposed project will reduce unnecessary and duplicative care and improve the quality of care provided to patients referred to and from post-acute care settings, as well as improve patient satisfaction regarding communication with doctors, nurses, and discharge information.

Related Projects:

- Project 1.2
- Project 2.2
- Project 3.1
- Project 3.2

Project 2.1 will aid in Carney's goal of maximizing care coordination with post-acute care providers, including mitigating preventable readmissions, and standardizing care processes. In particular, this project will leverage Project 1.2 by partnering with the same post-acute facilities to implement the enhanced communication protocols. Alignment and partnership on these two projects will help Carney ensure greater accountability by its external partners as well as improve the overall impact of both initiatives on care transitions.

Project 2.2 will also aid in implementation of this project by raising awareness among nursing staff for elder issues and potential complications. That education will allow staff to utilize the communication tools of Project 2.1 more effectively.

In conjunction, these initiatives will enable Carney to better manage the total cost and care of its patients, reduce complications, and implement the information technology infrastructure needed to perform under global risk-based payment arrangements under Project 3.1.

Finally, Project 3.2, a mandatory initiative to participate in a learning collaborative, will ensure that Steward is both actively sharing its experiences with other providers as well as continuing to implement best practices in its efforts to improve cross continuum tools for patients and providers.

Project 2.1: Enhance Patient Transitions Master Plan Project 2.3		
SFY 2012	**SFY 2013**	**SFY 2014**
2.1.1 (Process 20) **Milestone:** Assess current knowledge and barriers to INTERACT utilization. Create action plan and timeline for improvement. **Metric:** Complete report on lessons learned **Data Source:** internal records		

Project 2.1: Enhance Patient Transitions Master Plan Project 2.3		
SFY 2012	**SFY 2013**	**SFY 2014**
2.1.2 (Improvement 6-b1)	**2.1.2** (Improvement 6-b1) **Milestone:** Interact II utilization **Metric:** 50% hospital staff utilization for patients admitted from nursing homes (num: hospital staff utilizing Interact II for patients admitted from nursing homes; denom: acute inpatient nursing staff) **Data Source:** chart review	**2.1.2** (Improvement 6-b1) **Milestone:** Interact II utilization **Metric:** 90% hospital staff utilization for patients admitted from nursing homes (num: hospital staff utilizing Interact II for patients admitted from nursing homes; denom: acute inpatient nursing staff) **Data Source:** chart review
2.1.3 (Process 26-b1) **Milestone:** Creation of Patient Experience of Care Council **Metric:** Council creation **Data Source:** internal records		
2.1.4 (Process 27-b1) **Milestone:** Gap Analysis of current process and opportunities revolving around communication with Doctors, Nurses, and Discharge Information. Create action plan and timeline for improvement. **Metric:** Gap analysis complete **Data Source:** internal records		
2.1.5 (Improvement 8-b1) **Milestone:** HCAHPS: Communication with Doctors mean percent[18] (num: number of patients responding "always" to question; denom: number of patients responding to question) **Metric:** HCAHPS: Communication with Doctors. Establish baseline data for FY2012 **Data Source:** Press Ganey	**2.1.5** (Improvement 8-b1) **Milestone:** HCAHPS: Communication with Doctors mean percent (num: number of patients responding "always" to question; denom: number of patients responding to question) **Metric:** 2% improvement in Communication with Doctors over FY2012 Baseline (currently FY2012 baseline unknown) **Data Source:** Press Ganey	**2.1.5** (Improvement 8-b1) **Milestone:** HCAHPS: Communication with Doctors mean percent (num: number of patients responding "always" to question; denom: number of patients responding to question) **Metric:** 5% improvement in Communication with Doctors over FY2012 Baseline (currently FY2013 baseline unknown) **Data Source:** Press Ganey
2.1.6 (Improvement 9-b1) **Milestone:** HCAHPS: Communication with Nurses mean percent[19] (num:	**2.1.6** (Improvement 9-b1) **Milestone:** HCAHPS: Communication with Nurses mean percent (num: number of	**2.1.6** (Improvement 9-b1) **Milestone:** HCAHPS: Communication with Nurses mean percent (num:

[18] Mean percent refers to the percent of time patient choose "always" regarding survey questions on communication of discharge information over other likert scale options. Carney has opted to report its HCAHPS measures as mean percent rather than percentile as it is a more meaningful measure of improvement (while percentile is merely a comparison to other hospitals, mean percent allows Carney to compare its present performance to past performance). We have interpreted the Master Plan to allow us to use X percent for HCAHPS as an appropriate metric as we feel it is more appropriately able to demonstrate the type of improvement we anticipate this project will achieve.

[19] Mean percent refers to the percent of time patient choose "always" regarding survey questions on communication with nurses over other likert scale options. Carney has opted to report its HCAHPS measures as mean percent rather than percentile as it is a more meaningful measure of improvement (while percentile is merely a comparison to other hospitals,

Project 2.1: Enhance Patient Transitions Master Plan Project 2.3		
SFY 2012	**SFY 2013**	**SFY 2014**
number of patients responding "always" to question; denom: number of patients responding to question) **Metric:** HCAHPS: Communication with Nurses. Establish baseline data for FY2012 **Data Source:** Press Ganey	patients responding "always" to question; denom: number of patients responding to question) **Metric:** 2% improvement in Communication with Nurses over FY2012 Baseline (currently FY2012 baseline unknown) **Data Source:** Press Ganey	number of patients responding "always" to question; denom: number of patients responding to question) **Metric:** 5% improvement in Communication with Nurses over FY2012 Baseline (currently FY2013 baseline unknown) **Data Source:** Press Ganey
2.1.7 (Improvement 10-b1) **Milestone:** HCAHPS: Discharge Information mean percent[20] (num: number of patients responding "always" to question; denom: number of patients responding to question) **Metric:** HCAHPS: Discharge Information. Establish baseline data for FY2012 **Data Source:** Press Ganey	**2.1.7** (Improvement 10-b1) **Milestone:** HCAHPS: Discharge Information mean percent (num: number of patients responding "always" to question; denom: number of patients responding to question) **Metric:** 2% improvement in Discharge Information over FY2012 Baseline (currently FY2012 baseline unknown) **Data Source:** Press Ganey	**2.1.7** (Improvement 10-b1) **Milestone:** HCAHPS: Discharge Information mean percent (num: number of patients responding "always" to question; denom: number of patients responding to question) **Metric:** 5% improvement in Discharge Information over FY2013 Baseline (currently FY2013 baseline unknown) **Data Source:** Press Ganey

mean percent allows Carney to compare its present performance to past performance). We have interpreted the Master Plan to allow us to use X percent for HCAHPS as an appropriate metric as we feel it is more appropriately able to demonstrate the type of improvement we anticipate this project will achieve.

[20] Mean percent refers to the percent of time patient choose "always" regarding survey questions on communication with doctors over other likert scale options. Carney has opted to report its HCAHPS measures as mean percent rather than percentile as it is a more meaningful measure of improvement (while percentile is merely a comparison to other hospitals, mean percent allows Carney to compare its present performance to past performance). We have interpreted the Master Plan to allow us to use X percent for HCAHPS as an appropriate metric as we feel it is more appropriately able to demonstrate the type of improvement we anticipate this project will achieve.

Project 2.2: Implement Process Improvement Methodologies to Improve Safety, Quality, and Efficiency
Master Plan Project 2.7

Goal: This initiative will implement NICHE (Nurses Improving Care for Health system Elders), a national program focused on promoting evidenced-based care for elders.[21] The goal of this initiative is to achieve systematic nursing change that will benefit hospitalized older adults by improving outcomes of care. Through this initiative Carney will import principles and tools to stimulate positive changes in the care of its elder patients. Through the implementation of NICHE, Carney will improve elder patient outcomes and improve overall patient satisfaction and quality of care.

Rationale: Patients over the age of 65 make up approximately 50% of Carney's medical and surgical floors. Carney also offers a specialized geriatric psychiatry floor. Carney has three board certified geriatricians and three primary care providers with geriatrics as a large proportion of their practice. With a large geriatric population in the community Carney must be prepared to care for the acute needs of this elderly population. Assessments of the NICHE program indicate that post-implementation fewer patients are acutely confused at discharge, serious injuries related to falls are reduced by 30%, and there are reductions in the incidence of co-morbidities such as aspiration pneumonia, urinary tract infection, and immobility.[22] Outcome reports from implementation of NICHE also include increased nursing knowledge of geriatric care, decreased length of stay, and reduced costs. Inherent in the reduction of adverse events for elderly patients is a subsequent decrease in discharge to nursing homes. This initiative aligns with Carney's commitment to becoming a Geriatric Center of Excellence.[23]

Program Description: NICHE is a program of the Hartford Institute for Geriatric Nursing at the New York University College of Nursing, the only national nursing led program designed to improve the care of hospitalized older adult patients. The NICHE program provides tools and resources to increase geriatric nurse competence as well as health care system principles, processes, and structures that support continued learning and the application of specialized knowledge into practice.[24] NICHE provides the resources and technical support of a major university's nationally renowned geriatric program, as well as the expertise of NICHE providers who take part in an ongoing collaborative to share resources and experiences. This project will also incorporate biweekly interdisciplinary teams to enhance the impact of NICHE learning and improve outcomes for hospitalized elders. Early studies on the use of geriatric evaluation and geriatric evaluation units demonstrated an impact on reducing disability and nursing home placement for this vulnerable population.

The NICHE program works by importing principles and tools to stimulate positive changes in the care of its elder patients. The program evaluates elder care outcomes and improves nursing competence in elder issues such as timely identification and response to symptoms of delirium, confusion, and immobility. To complete the program, nurses must attend 20 education hours, via computerized modules and live seminars, designed to educate providers in evidence-based care protocols and encourage providers to re-think care for the geriatric population. Nurses completing the program will be eligible to apply for American Nurses Credentialing Center (ANCC) certification in geriatric care. The program also provides continuing education for nurses who have

[21] See http://www.nicheprogram.org/
[22] Joseph G. Ouslander and Robert A. Berenson, *Reducing Unnecessary Hospitalizations of Nursing Home Residents*, New England Journal of Medicine, 365:13, September 29, 2011; Ruth M. Kleinpell, Kathy Fletcher, Bonnie M. Jennings, Chapter 11: Reducing Functional Decline in Hospitalized Elderly, page 7-8.
[23] The "Geriatric Center of Excellence" title is self-generated and reflective of Carney's commitment to providing excellent geriatric care. This commitment is reflected in Carney's mission statement: "It is our goal at Carney to provide exemplary care for our geriatric population. We are committed to excellence in Nursing, Medicine, Therapies and all Allied Services through the implementation of education, and utilization of best practices conducive to the older adult. To provide holistic patient centered care with a strong commitment to an interdisciplinary team approach."
[24] Fulmer et al., 2002; Mezey et al., 2004.

already completed the basic course. NICHE relies upon assessment tools to identify potential co-morbidities in elder patients. This assessment provides actionable information regarding potential complications and based upon the initial assessment, helps providers address potential complications earlier, more effectively, and in a patient-centered manner.

Carney has approximately 85 nurses providing direct care to geriatric inpatients. Each year, Carney will identify more existing nurses through voluntary recruitment for ANCC certification to continue to grow its commitment to providing excellent geriatric care. This program is expected to impact approximately 2,300 elder patients who pass through Carney each year. In conjunction with the implementation of NICHE protocols, Carney will also convene multidisciplinary teams composed of geriatric physicians, medical interns and residents, nurses, dieticians, social workers, pharmacists, and occupational, speech, and physical therapists to regularly discuss the plan of care for high risk elderly patients.

In order to determine whether the program is having systematic impact on staff culture, Carney will conduct a pre and post Geriatric Institutional Assessment Profile (GIAP) survey annually to relevant hospital staff. The GIAP survey is a self-completed "culture of quality" survey for hospital staff, designed to assess institutional attitudes, knowledge, and strengths and barriers to the provision of care for elders. The GIAP was developed by a national panel of geriatric care experts.[25] Parameters for the survey are based on the work of the Educational Development Center's "Decisions Project."[26] GIAP data will assist Carney in re-designing geriatric care as well as prioritizing additional programs to change perceptions and/or knowledge. In addition, Carney will monitor indicators of elder care such as rate of falls, immobility, delirium, and confusion. Successful implementation of NICHE protocols will be reflected in early identification of the above conditions, decreased adverse events such as falls, and improved patient satisfaction with care and communication. Carney will specifically monitor falls with injury as fall rates often reflect issues of patient confusion, delirium, and immobility.

By implementing a new operational mindset for direct care providers, the NICHE program enhances care and outcomes, resulting in improvements in safety, quality, and efficiency. Over the demonstration period, Carney will expand utilization of NICHE protocols, aiming for complete integration of NICHE standards and process improvements. The goal is for this program to transform Carney's care delivery for elder patients into a patient-centered model that prioritizes prevention and early intervention.

How Project Will Refine Innovations, Test, and Disseminate Findings: This initiative will implement the evidence-based NICHE program to improve care for elders. As a Geriatric Center of Excellence, Carney is excited to test this model and assess its impact on the quality of care provided to its significant elderly patient population. The traditional NICHE program will be further refined as Carney will incorporate biweekly interdisciplinary teams composed of geriatric physicians, medical interns and residents, nurses, dieticians, social workers, pharmacists, and occupational, speech, and physical therapists to enhance the impact of NICHE learning. Findings from this project will be disseminated throughout the Steward system, as well as through the regular progress reports required as part of the DSTI program.

Expected Results: This project will result in implementation of NICHE protocols in Carney's acute care setting. The project will also improve staff knowledge and attitudes about geriatric patient needs. Finally, the NICHE project is expected to result in a reduction of falls in the acute care setting and early identification of patients at risk for de-mobility.

Related Projects:

[25] Solomon, et al., 1993.
[26] Id.

- Project 1.2
- Project 2.1
- Project 3.1
- Project 3.2

Project 2.2 will build upon Steward system-wide accomplishments as well as other DSTI projects with the goal of strengthening Carney's geriatric strategy. This project most directly impacts Projects 1.2 and 2.1, both also concerned with improving care for Carney's significant elder population. By improving awareness and knowledge regarding geriatric issues and early identification of complications in the acute care setting, Carney will be a more effective partner in transitioning patients to and from post-acute settings and ensuring clear communication with both patients and post-acute partners. In conjunction, these initiatives will enable Carney to better manage the total cost and care of its patients, reduce complications, and implement the information technology infrastructure needed to perform under global risk-based payment arrangements under Project 3.1.

Finally, Project 3.2, a mandatory initiative to participate in a learning collaborative, will ensure that Steward is both actively sharing its experiences with other providers as well as continuing to implement best practices in its efforts to improve cross continuum tools for patients and providers.

Collectively, these projects support Carney's long-term vision to serve the Dorchester community as part of Steward's fully integrated, community-based health care system able to integrate patient care over the entire continuum.

Project 2.2: Implement Process Improvement Methodologies to Improve Safety, Quality, and Efficiency Master Plan Project 2.7		
SFY 2012	**SFY 2013**	**SFY 2014**
2.2.1 (Process 22-b1) **Milestone:** Nurse leadership education **Metric:** completion of Leadership training for 4 nursing leaders **Data Source:** education records		
2.2.2 (Process 18-b1)	**2.2.2** (Process 18-b1) **Milestone:** Nurse education[27] **Metric:** completion of geriatric learning modules by 15 nurses[28] **Data Source:** education records	**2.2.2** (Process 18-b1) **Milestone:** Nurse education **Metric:** completion of geriatric learning modules by 15 additional nurses **Data Source:** education records
2.2.3 (Process 19-b1)	**2.2.3** (Process 19-b1) **Milestone:** Nurse certification **Metric:** ANCC certification of 2 nurses completing learning modules **Data Source:** Certification records	**2.2.3** (Process 19-b1) **Milestone:** Nurse certification **Metric:** ANCC certification of 2 additional nurses completing learning modules **Data Source:** Certification records
2.2.4 (Process 23-b1) **Milestone**: Develop education and marketing to inform staff on GIAP and importance of geriatric care		

[27] NICHE is an accredited program providing counting education on geriatric care.
[28] The number of nurses required to incorporate an expert resource nurse on the pilot medical surgical units for each shift.

Project 2.2: Implement Process Improvement Methodologies to Improve Safety, Quality, and Efficiency Master Plan Project 2.7		
SFY 2012	**SFY 2013**	**SFY 2014**
Metric: Creation of Geriatric Institutional Assessment Profile (GIAP) education and marketing materials **Data Source:** internal record		
2.2.5 (Process 24-b1)	**2.2.5** (Process 24-b1) **Milestone:** Analysis of Geriatric Institutional Assessment Profile (GIAP) **Metric:** Completion of full analysis of GIAP survey. Prioritization of opportunity area to define starting points for education. **Data Source:** survey results	
2.2.6 (Process 20-b1)	**2.2.6** (Process 20-b1) **Milestone:** Geriatric Institutional Assessment Profile (GIAP) study **Metric:** 30% Carney staff participation in GIAP survey; establish baseline regarding knowledge and attitudes regarding geriatric care **Data Source:** internal record (results of survey)	**2.2.6** (Process 20-b1) **Milestone:** Geriatric Institutional Assessment Profile (GIAP) study **Metric:** 40% Carney staff participation in GIAP survey **Data Source:** survey results
2.2.7 (Improvement 8-b1)		**2.2.7** (Improvement 8-b1) **Milestone:** Geriatric Institutional Assessment Profile (GIAP) study improved knowledge and attitudes **Metric:** Statistically significant improvement for overall knowledge and attitude scores regarding geriatric care over prior FY in GIAP survey (from 2.2.5) **Data Source:** survey results
2.2.8 (Improvement 5-b1) **Milestone:** Rate of falls (with injury) (num: number of inpatient falls resulting in injury; denom: number of inpatient days) **Metric:** Establish baseline for rate of falls (with injury) **Data Source:** internal records	**2.2.8** (Improvement 5-b1) **Milestone:** Rate of falls (with injury) (num: number of inpatient falls resulting in injury; denom: number of inpatient days) **Metric:** 2% Reduction of falls (with injury) over baseline FY2012 (baseline FY2012 unknown until the FY is over) **Data Source:** internal records	**2.2.8** (Improvement 5-b1) **Milestone:** Rate of falls (with injury) (num: number of inpatient falls resulting in injury; denom: number of inpatient days) **Metric:** 3% Reduction of falls (with injury) over baseline FY2013 (baseline FY2013 unknown until the FY is over) **Data Source:** internal records
2.2.9 (Improvement 7-b1)		**2.2.9** (Improvement 7-b1) **Milestone:** Rate of improvement in pressure ulcers (num: number of pressure ulcers; denom: number of inpatient days) **Metric:** 2% Reduction of Pressure Ulcers over baseline FY2013 (baseline FY2013 unknown until the FY is over)

Project 2.2: Implement Process Improvement Methodologies to Improve Safety, Quality, and Efficiency Master Plan Project 2.7		
SFY 2012	**SFY 2013**	**SFY 2014**
		Data Source: internal records

Project 2.3: Reduce Variations in Care
Master Plan Project 2.9

Goal: This project will implement condition-specific Clinical team Care Maps that describe the needed evidence-based care for patients throughout the care continuum. The primary goal is to reduce variations in care for targeted high risk conditions, including heart failure (CHF) and pneumonia (PN). Care Maps will ensure smooth handoffs between hospital departments as well as from the hospital to post-acute care or the home. In addition to a clinical Care Map with protocols for staff, patients receiving diagnoses of targeted conditions will also be provided a Patient/Family Care Map, which will detail what they may expect over the course of their treatment as well as questions they may want to ask their clinical team. Nurses will review the patient Care Map with patients each day, enhancing communication regarding treatment between hospital staff and patients. After complete implementation and success with CHF and PN, Care Maps will be developed and implemented to address other high risk populations such as chronic obstructive pulmonary disease (COPD) and acute myocardial infarction (AMI) patients. The CHF Care Map was created through a multidisciplinary expert team in SFY2012 and will be piloting in June 2012. The PN Care Map will be standardized and piloted in the first half of SFY2013; and the COPD Care Map developed and piloted later in SFY2013. AMI Care Map development and piloting will follow in SFY2014.

Rationale: Certain conditions carry a high risk of readmission, including Heart Failure and Pneumonia. Within these two diagnoses there is variation in care throughout the continuum which potentially leads to further hospitalizations. By incorporating best practices into a specific, comprehensive protocol via the Care Maps, variation will be reduced, the overall quality of care will increase, and errors will be easier to spot and correct going forward. Initiatives such as Care Maps or clinical pathways have been demonstrated to reduce variations in care and result in overall higher quality of care.[29] Carney plans to implement its first Care Map in SFY2012, with piloting of the CHF Care Map into multi-disciplinary rounds beginning in June. The patient Care Map component will also serve to keep patients engaged in their treatment plan and subsequently more likely to make the necessary follow-up appointments.

Program Description: The purpose of the Care Map is to reduce variation throughout the patients' continuum of care, improve communication among care providers, and standardize evidence-based practice. Persistent evidence of unexplained variation in medical practice gave rise to the idea of developing specific clinical pathways of care. Care Maps or clinical pathways are used to plan medical care; specific goals usually include the following:[30]

1. Selecting a "best practice" when practice styles vary unnecessarily
2. Defining standards for the expected duration of hospital stay and for the use of tests and treatments
3. Examining the interrelations among the different steps in the care process to find ways to coordinate or decrease the time spent in the rate-limiting steps
4. Giving all hospital staff a common "game plan" from which to view and understand their various roles in the overall care process
5. Providing a framework for collecting data on the care process so that providers can learn how often and why patients do not follow an expected course during their hospitalization
6. Decreasing nursing and physician documentation burdens
7. Improving patient satisfaction with care by educating patients and their families about the plan of care and involving them more fully in its implementation

[29] *Critical Pathways as a Strategy for Improving Care: Problems and Potential,* Steven D. Pearson, MD, MSc; Dorothy Goulart-Fisher, RN; and Thomas H. Lee, MD, MSc
[30] Id.

While clinical pathways are available from various sources, the Care Maps to be implemented by Steward are unique in their inclusion of care transitions and post-acute care, in addition to hospital-based care. Steward has created Congestive Heart Failure (CHF) and Pneumonia (PN) Care Maps based on literature and evidence-based practice. The maps were detailed and finalized by clinical experts from different backgrounds such as the emergency room, inpatient, home care, skilled nursing facilities, and primary care in order to span the continuum of care from admission through a post-discharge period. The Clinical Care Maps review critical functions of the physician, nurse, case managers, pharmacy, nutrition, and physical therapy at each stage of care. The Care Map for Congestive Heart Failure is included as Attachment B.

Utilization of the Clinical Care Map ensures that when the patient is admitted through the ED, all providers know the patient met a specified set of criteria. Once on the inpatient floor, the Care Map requires standardized assessment questions for predicting discharge needs and incorporates changes in the patient's plan of care. The Care Maps ensure that cognitive and psychological status is checked as well as functional status, cultural values, medication, and special needs. The Care Map also ensures that patient and family caregivers that need to be educated throughout inpatient and outpatient transitions are identified. If a referral for home care, advanced practice nurse, or transitions coach is under consideration, the Care Map ensures that the team begins communication with the appropriate agency early for effective transition assessment.

The Clinical Care Maps will be used during multidisciplinary rounds for each patient identified with the relevant diagnoses. This will guide the conversations for each day of the patient's stay and require that each clinical team member be able to discuss their needed topics as identified by the Care Map. The plan of care, based on the Care Map discussion at multidisciplinary rounds, is taken back to the patient and added to the patient white board in addition to clarifying conversations by any clinical team member that enters the patient's room.

The Care Maps also detail education starting upon admission, pharmacy interventions and teaching, and a physical therapy consult. Compliance and patient engagement will be measured through teach back completion rates and number of pharmacy visits to critical patients before discharge.

The Clinical Care Map is replicated in a patient-centric manner in the Patient/Family Care Map, provided to patients on their arrival as an inpatient. The Patient/Family Care Map walks patients through expectations for each day of their stay by explaining tests, medications, and questions the patient may want to ask their clinical team. Post-discharge, the Patient/Family Care Map explains processes and expectations for discharge to the home, rehab, or nursing facility as well as follow-up care. The Patient/Family Care Map encourages patients to ask important questions regarding medications and self-monitoring activities. The Patient/Family Care Map is perfectly complemented by the Clinical Care Map, and will be referenced by attending physicians, nurses, and case managers. Patient understanding of key steps and expectations is enhanced through the teach back method in which the patient is asked to explain the process to clinical staff.

The hospital based Clinical and Patient/Family Care Maps have been used as model for Steward primary care offices, Steward Home Care and our high volume skilled nursing facilities. Each of these cross continuum receivers is developing CHF and PN Care Maps that will extend the hospital based Clinical and Patient/Family Care Map in order to reduce variation in care for these patients and ensure that no matter where they enter the system of care, each group will use similar evidence based care, education, and targets.

Care Maps will be utilized for all patients meeting the diagnosis criteria. Once the CHF and PN Care Maps are successfully implemented, Carney will begin integrating Care Maps for patients with COPD and AMI sometime in FY2014.

How Project Will Refine Innovations, Test, and Disseminate Findings: This project represents an innovation on the use of an evidence-based practice, clinical pathways, to reduce variations in care for targeted high risk conditions. The Care Maps developed for this project are recently created documents that not only include best practices within the acute care setting, but also provide a new and unique way of involving patients and their families. Findings from this initiative will be disseminated throughout the Steward system. Additionally, broader dissemination will occur through Steward's Transitions in Care team, a group including several post-acute providers and external stakeholders that meets monthly to discuss patient transitions as well as through the regular progress reports required as part of the DSTI program.

Expected Results: This program is expected to reduce readmissions, enhance quality scores for core measures related to targeted diagnoses, improve patient "teach back" rates, and reduce variations in care.

Related Projects:

- Project 1.1
- Project 3.1
- Project 3.2

This project addresses Carney's goal of implementing cross continuum health system navigation tools for culturally diverse patients and enhancing the patient experience. Use of Patient/Family Care Maps in addition to Project 1.1's implementation of bilingual, culturally competent community health workers will help engage Carney's diverse patient population provide tools to aid in navigation through the health care system.

Both initiatives are will ensure that patients are empowered to seek and access the care they need at the right time, in the right setting. Both initiatives seek to empower typically-disenfranchised, low income patients by enhancing patient communication and providing tools that actively engage patients in a manner that is culturally and linguistically appropriate.

Project 3.1 to implement global risk-based payment arrangements for state-sponsored low income populations represents the culmination of Carney's efforts to engage patients and coordinate care along the entire health spectrum. Under this initiative, Carney will receive a "global budget" for the care of its Medicaid patient population while achieving specified benchmarks in care management, quality, and cost growth. With enhanced patient engagement, Carney will be able to successfully manage Medicaid patients under global and/or shared savings-type arrangements as described in Project 3.1.

Finally, Project 3.2, a mandatory initiative to participate in a learning collaborative, will ensure that Steward is both actively sharing its experiences with other providers as well as continuing to implement best practices in its efforts to improve cross continuum tools for patients and providers.

Project 2.3: Reduce Variations in Care Master Plan Project 2.9		
SFY 2012	**SFY 2013**	**SFY 2014**
2.3.1 (Process 5-b1) **Milestone:** Piloting CHF Care Map (clinical during multidisciplinary rounds, patient/family care map during RN to patient/family communication) **Metric:** Implementation of CHF Clinical Care Maps in multidisciplinary rounds, and Patient/Family Care Maps for RN to	**2.3.1** (Process 5-b1) **Milestone:** Piloting PN Care Map (clinical during multidisciplinary rounds, patient/family care map during RN to patient/family communication) **Metric:** Implementation of PN Clinical Care Maps in multidisciplinary rounds, and Patient/Family Care Maps for RN to	**2.3.1** (Process 5-b1) **Milestone:** Piloting AMI Care Map (clinical during multidisciplinary rounds, patient/family care map during RN to patient/family communication) **Metric:** Implementation of AMI Clinical Care Maps in multidisciplinary rounds, and Patient/Family Care Maps for RN to

Project 2.3: Reduce Variations in Care Master Plan Project 2.9		
SFY 2012	**SFY 2013**	**SFY 2014**
patient/family communication **Data Source:** internal records	patient/family communication **Data Source:** internal records	patient/family communication **Data Source:** internal records
2.3.2 (Process 3-b1)	**2.3.2** (Process 3-b1) **Milestone:** Implementation of CHF and PN Clinical Care Maps in multidisciplinary rounds, and Patient/Family Care Maps for RN to patient/family communication (num: number of individual multidisciplinary rounds using CHF and PN Clinical Care Maps and Patient/Family Care Maps for RN to patient/family communication; denom: total number of multidisciplinary rounds) **Metric:** 80% utilization of CHF and PN Care Maps (clinical during multidisciplinary rounds, patient/family care map during RN to patient/family communication) **Data Source:** internal records	**2.3.2** (Process 3-b1) **Milestone:** Implementation of COPD and AMI Clinical Care Maps in multidisciplinary rounds, and Patient/Family Care Maps for RN to patient/family communication (num: number of individual multidisciplinary rounds using COPD and AMI Clinical Care Maps and Patient/Family Care Maps for RN to patient/family communication; denom: total number of multidisciplinary rounds) **Metric:** 50% utilization of COPD and AMI Care Maps (clinical during multidisciplinary rounds, patient/family care map during RN to patient/family communication) **Data Source:** internal records
2.3.3 (Improvement 2-b1) **Milestone:** All-cause Readmissions (num: patients discharged after index admission and readmitted within 30 days; denom: all patients discharged after index admission) **Metric:** 5% decrease in 30 Day All-cause readmissions from prior FY11 (Baseline FY11 14.1%, reduce to 13.4% for FY2012) **Data Source:** UHC database	**2.3.3** (Improvement 2-b1) **Milestone:** All-cause Readmissions (num: patients discharged after index admission and readmitted within 30 days; denom: all patients discharged after index admission) **Metric:** 5% decrease in 30 Day All-cause readmissions from FY12 (baseline FY2012 unknown until the FY is over) **Data Source:** UHC database	**2.3.3** (Improvement 2-b1) **Milestone:** All-cause Readmissions (num: patients discharged after index admission and readmitted within 30 days; denom: all patients discharged after index admission) **Metric:** 5% decrease in 30 Day All-cause readmissions from FY13 (baseline FY2013 unknown until the FY is over) **Data Source:** UHC database
2.3.4 (Improvement 3-b1) **Milestone:** CHF All-cause Readmissions (num: number of readmissions where patient was initially admitted for CHF diagnosis as defined by CMS final rule; denom: total number of inpatient discharges where patient was admitted for CHF as defined by CMS final rule) **Metric:** 5% decrease in 30 Day All-cause CHF readmissions from FY11 (Baseline FY11 28.2%, reduce to 26.8% for FY2012) **Data Source:** UHC database	**2.3.4** (Improvement 3-b1) **Milestone:** CHF All-cause Readmissions (num: number of readmissions where patient was initially admitted for CHF diagnosis as defined by CMS final rule; denom: total number of inpatient discharges where patient was admitted for CHF as defined by CMS final rule) **Metric:** 5% decrease in 30 Day All-cause CHF readmissions from FY12 (baseline FY2012 unknown until the FY is over) **Data Source:** UHC database	**2.3.4** (Improvement 3-b1) **Milestone:** CHF All-cause Readmissions (num: number of readmissions where patient was initially admitted for CHF diagnosis as defined by CMS final rule; denom: total number of inpatient discharges where patient was admitted for CHF as defined by CMS final rule) **Metric:** 5% decrease in 30 Day All-cause CHF readmissions from FY13 (baseline FY2013 unknown until the FY is over) **Data Source:** UHC database
2.3.5 (Improvement 4-b1) **Milestone:** PN All-cause Readmissions (num: number of readmissions where	**2.3.5** (Improvement 4-b1) **Milestone:** PN All-cause Readmissions (num: number of readmissions where	**2.3.5** (Improvement 4-b1) **Milestone:** PN All-cause Readmissions (num: number of readmissions where

Project 2.3: Reduce Variations in Care Master Plan Project 2.9		
SFY 2012	**SFY 2013**	**SFY 2014**
patient was initially admitted for PN diagnosis as defined by CMS final rule; denom: total number of inpatient discharges where patient was admitted for PN as defined by CMS final rule) **Metric:** 5% decrease in 30 Day All-cause PN readmissions from FY11 (Baseline FY11 16.1%, reduce to 15.3% for FY2012) **Data Source:** UHC database	patient was initially admitted for PN diagnosis as defined by CMS final rule; denom: total number of inpatient discharges where patient was admitted for PN as defined by CMS final rule) **Metric:** 5% decrease in 30 Day All-cause PN readmissions from FY12 (baseline FY2012 unknown until the FY is over) **Data Source:** UHC database	patient was initially admitted for PN diagnosis as defined by CMS final rule; denom: total number of inpatient discharges where patient was admitted for PN as defined by CMS final rule) **Metric:** 5% decrease in 30 Day All-cause PN readmissions from FY13 (baseline FY2013 unknown until the FY is over) **Data Source:** UHC database
2.3.6 (Improvement 5-b1) **Milestone:** Percent CHF Core measure Compliance[31] (FY11 Baseline: 92.8%) (num: number of appropriate care measures received by eligible CHF patients; denom: number of opportunities for eligible CHF patients to receive appropriate care measures[32]) **Metric:** Overall Core Measure Compliance for CHF Bundle at 94% **Data Source:** UHC database	**2.3.6** (Improvement 5-b1) **Milestone:** Percent CHF Core measure Compliance (num: number of appropriate care measures received by eligible CHF patients; denom: number of opportunities for eligible CHF patients to receive appropriate care measures) **Metric:** Overall Core Measure Compliance for CHF Bundle 5% better than last FY (percentiles for FY2012 unknown until the FY is over) **Data Source:** UHC database	**2.3.6** (Improvement 5-b1) **Milestone:** Percent CHF Core measure Compliance (num: number of appropriate care measures received by eligible CHF patients; denom: number of opportunities for eligible CHF patients to receive appropriate care measures) **Metric:** Overall Core Measure Compliance for CHF Bundle 7% better than last FY (percentiles for FY2013 unknown until the FY is over) **Data Source:** UHC database
2.3.7 (Improvement 6-b1)	**2.3.7** (Improvement 6-b1) **Milestone:** Percent PN Core measure Compliance[33] (num: number of appropriate care measures received by eligible PN patients; denom: number of opportunities for eligible PN patients to receive appropriate care measures[34]) **Metric:** Overall Core Measure Compliance for PN Bundle 5% better than last FY (percentiles for FY2012 unknown until the FY is over)	**2.3.7** (Improvement 6-b1) **Milestone:** Percent PN Core measure Compliance (num: number of appropriate care measures received by eligible PN patients; denom: number of opportunities for eligible PN patients to receive appropriate care measures) **Metric:** Overall Core Measure Compliance for PN Bundle 7% better than last FY (percentiles for FY2013 unknown until the FY is over)

[31] Carney has opted to look at core measure progress for CHF by examining the overall percent compliance to the measures. The overall bundle is a compilation of different measures that need to be satisfied with eligible patients. The number of eligible patients with the care measures satisfied is the numerator and the total number of eligible patients is the denominator. Therefore, it makes more sense to judge progress on a year over year basis rather than looking at a nationwide standard that may or may not change positively, negatively, or not change at all. Using a standard percent compliance ensures that Carney Hospital must improve to hit each year's goal.

[32] Measures include HF-1: Discharge Instructions, HF-2: Evaluation of LVF Function, and HF-3: ACEI or ARB for LVSD.

[33] Carney has opted to look at core measure progress for PN by examining the overall percent compliance to the measures. The overall bundle is a compilation of different measures that need to be satisfied with eligible patients. The number of eligible patients with the care measures satisfied is the numerator and the total number of eligible patients is the denominator. Therefore, it makes more sense to judge progress on a year over year basis rather than looking at a nationwide standard that may or may not change positively, negatively, or not change at all. Using a standard percent compliance ensures that Carney Hospital must improve to hit each year's goal.

[34] Measures include PN-3b: Blood Cultures Performed in the ED prior to Initial Antibiotic Received and PN-6: Initial Antibiotic Selection.

Project 2.3: Reduce Variations in Care Master Plan Project 2.9		
SFY 2012	**SFY 2013**	**SFY 2014**
	Data Source: UHC database	**Data Source:** UHC database
2.3.8 (Improvement 7-b1)		**2.3.8** (Improvement 7-b1) **Milestone:** Percent AMI Core measure Compliance[35] (num: number of appropriate care measures received by eligible AMI patients; denom: number of opportunities for eligible AMI patients to receive appropriate care measures[36]) **Metric:** Overall Core Measure Compliance for AMI Bundle 5% better than last FY (percentiles for FY2013 unknown until the FY is over) **Data Source:** UHC database
2.3.9 (Improvement 1-b1) **Milestone:** Percent teach back (teach back process measure data begins July 2011) (num: number of instances where clinical staff utilized teach back to ensure patient understanding; denom: total number of clinical to patient interactions as defined by the STAAR collaborative sampling strategy) **Metric:** 50% completion of teach back **Data Source:** internal records	**2.3.9** (Improvement 1-b1) **Milestone:** Percent teach back (num: number of instances where clinical staff utilized teach back to ensure patient understanding; denom: total number of clinical to patient interactions as defined by the STAAR collaborative sampling strategy) **Metric:** 70% completion of teach back **Data Source:** internal records	**2.3.9** (Improvement 1-b1) **Milestone:** Percent teach back (num: number of instances where clinical staff utilized teach back to ensure patient understanding; denom: total number of clinical to patient interactions as defined by the STAAR collaborative sampling strategy) **Metric:** Continued 80% completion of teach back **Data Source:** internal records
2.3.10 (Improvement 8-b1)	**2.3.10** (Improvement 8-b1) **Milestone:** CHF Percent pharmacy discharge (num: number of CHF patients who were visited by pharmacist before discharge; denom: total number of CHF patients) **Metric:** 50% pharmacy discharge interventions CHF patients **Data Source:** internal records	**2.3.10** (Improvement 8-b1) **Milestone:** CHF and PN Percent pharmacy discharge (num: number of CHF and PN patients who were visited by pharmacist before discharge; denom: total number of CHF and PN patients) **Metric:** 75% pharmacy discharge interventions CHF and PN **Data Source:** internal records
2.3.11 (Process 2-b1) **Milestone:** Develop CHF Care Map	**2.3.11** (Process 2-b1) **Milestone:** Develop PN Care Map	**2.3.11** (Process 2-b1) **Milestone:** Develop AMI Care Map

[35] Carney has opted to look at core measure progress for AMI by examining the overall percent compliance to the measures. The overall bundle is a compilation of different measures that need to be satisfied with eligible patients. The number of eligible patients with the care measures satisfied is the numerator and the total number of eligible patients is the denominator. Therefore, it makes more sense to judge progress on a year over year basis rather than looking at a nationwide standard that may or may not change positively, negatively, or not change at all. Using a standard percent compliance ensures that Carney Hospital must improve to hit each year's goal.

[36] Measures include AMI-1: Aspirin at Arrival, AMI-2: Aspirin Prescribed at Discharge, AMI-3: ACEI or ARB for LVSD, AMI-5: Beta-blocker Prescribed at Discharge, AMI-8a: Primary PCI within 90 Minutes of Arrival, and AMI-10: Statin Prescribed at Discharge.

Project 2.3: Reduce Variations in Care Master Plan Project 2.9		
SFY 2012	**SFY 2013**	**SFY 2014**
Metric: Completion of CHF Care Map **Data Source:** internal records	**Metric:** Completion of PN Care Map **Data Source:** internal records	**Metric:** Completion of AMI Care Map **Data Source:** internal records

Category 3 – Ability to respond to statewide transformation to value-based purchasing and to accept alternatives to fee-for-service payments

Project 3.1: Implement Global Payment Pilot
Master Plan Project 3.8

Goal: The goal of this initiative is to coordinate care for Carney's low-income patients who are eligible for state-subsidized health care programs ("state-subsidized low-income patients") under global (see description below) or other risk-based contracting arrangements by the end of the demonstration period. Over the course of the three year project, Steward will collaborate with MassHealth, state government, and/or other payer(s) who provide services to state-subsidized low-income patients (herein after, the "payers"), to develop models for beneficiary attribution that align with federal programs such as the Medicare Pioneer ACO program.[37] In addition, Steward will partner with the payer(s) in payment arrangements which include annual payment measures and benchmarks that reward Carney for achieving high quality, cost effective care. It is anticipated that the payment structure and metrics developed under this project will be transferable to other safety net providers, especially disproportionate share hospitals under the DSTI program. This will ensure that state-subsidized low-income patients are receiving the same high quality services and care across multiple providers and that safety net providers are functioning as efficiently as possible under similar metrics.

Rationale: By transitioning safety net hospitals to global budget or other risk-based payment models, these hospitals can reduce the annual growth in total medical expense, and ensure continued access to high quality health care for the state's most vulnerable residents.

Program Description: Carney Hospital, as part of the Steward Health Care system, has already developed the basic capabilities to operate under a global payment / risk-based arrangement. This project will allow Carney to transform those capabilities into performing as an accountable care organization for additional, low-income populations. Carney, as part of Steward, has developed the capabilities for alternative payments but been provided limited opportunity to test its capabilities. This project expands on foundational work by putting capabilities into practice. The project further targets a unique population – state-sponsored low income individuals. Steward believes actively pursuing global / risk-based payment arrangements is the key to Carney's long-term sustainability given its high safety net population and location in an area with significant academic medical center presence.

Under the proposed global / risk-based payment project, Steward will be responsible for coordinating the care of state-subsidized low-income patients who can be appropriately attributed to Steward Carney Hospital. Steward is currently under global / risk-based contracts with commercial health plans (e.g. Blue Cross Blue Shield Alternative Quality Contract), as well as with the Centers for Medicare and Medicaid Innovation under the Medicare Pioneer ACO program. Such payment models offer an accelerated pathway to providing integrated care, the future of care delivery and provider reimbursement.

Over the course of the demonstration period, Steward will work with the payer(s), as needed, to develop key elements of the pilot program including beneficiary alignment and attribution, quality measurement, rate development, data-sharing, program monitoring, etc. The payment model will be designed to ensure alignment with the goals of the DSTI program and existing CMS payment policies and demonstrations.

[37] Alignment will be achieved to the extent Steward is able to negotiate such parameters and alignment methodologies are not pre-defined based on program logistics.

Global payment arrangements and other risk-based payment arrangements are an effective alternative to the traditional fee-for-service model, as global payment arrangements (with shared risk) reward the appropriate management of lower total medical expenses and more importantly, high quality care in the right settings. Under the global / risk-based payment pilot, Carney will be financially responsible for managing the care, utilization, and overall cost of the health care services (including primary, specialty, pharmacy, ancillary, and hospital care) it provides to patients who select a Steward primary care physician based out of the Carney Hospital service area. The global arrangement will include detailed quality performance measures, as well as cost targets for both physicians and hospitals.

There are numerous benefits to developing the proposed global / risk-based payment pilot program. First, global / risk-based payment arrangements drive reform and encourage quality care and lower unit price by keeping care in the right setting and more importantly, to improve quality outcomes and patient satisfaction. In this way, global payment arrangements and similar risk-based payment arrangements work to lower utilization by aligning physician reimbursement to providing the most appropriate care, as opposed to a fee-for-services model that ties physician reimbursement to providing more services. Thus, in addition to focusing on quality, this financial arrangement addresses both the unit price, as well as the utilization component that has been one of the drivers of rising health care costs.[38] Global or other risk-based payments are also a meaningful tool to share any savings that result from achieved financial efficiencies, among providers, payers, and patients. Payers and beneficiaries may yield the benefit of financial savings through lower cost-sharing and better utilization of care, while providers are rewarded for both enhancing their efficiency and by improving quality scores and patient satisfaction.

Although each global payment arrangement is unique, they all share the same basic building blocks of risk-sharing. Over the demonstration period, Steward will work with the payer(s) to develop a framework for the pilot, ultimately resulting in a risk-based payment framework with characteristics such as:

- A global budget based on historical claim expenses and adjusted annually for cost inflation and changes in the health status of aligned beneficiaries;
- A methodology for assigning and attributing patients who receive a plurality of services from Steward physicians aligned with Carney Hospital;
- An annual settlement process that reconciles the global budget against total expenses for aligned beneficiaries (in the interim, fee-for-service payments are made to the hospitals and physicians);
- Insurance risk to Steward that is limited through approaches such as budget caps, stop-loss protections, and reinsurance;
- Quality measures and targets established for both physicians and hospitals, achievement of such targets which is awarded financially through bonuses or greater percentages of risk share; and
- Lower annual increases in Carney patient total medical expense.

By developing a global / risk-based payment pilot, Carney has an opportunity to improve the care of its state-subsidized low-income patients – and as importantly – to be rewarded for its efforts to coordinate and manage the care of medically complex patients. Steward is very excited about the proposed global / risk-based payment

[38] Massachusetts Medicaid Policy Institute & Blue Cross Blue Shield Foundation, *Stabilizing MassHealth Funding: Options to Break the Recurring Cycle of Expansion and Contraction*, February 2012.

pilot and looks forward to collaboratively implementing this new model of care. We strongly believe that this type of value-based payment and delivery system model will help us to continue to provide high quality care to Carney's low-income patients in an efficient and coordinated manner, as well as aid the Commonwealth in achieving sustainable health care cost growth that does not come at the expense of providers or beneficiaries.

Expected Results: Implementation of pilot program for global / risk-based payments for state-subsidized low-income patients to reduce costs and improve patient outcomes. This project will provide the framework for implementing global or risk-based payments for low-income patients and serve as a model for transitioning additional Massachusetts providers to globally based payments, enhancing coordinated care and controlling cost growth for the aligned patient population.

Related Projects:

- Project 1.1
- Project 1.2
- Project 2.1
- Project 2.2
- Project 2.3

Projects selected as part of the DSTI program are designed to further build upon Steward system-wide accomplishments, strengthen Carney's geriatric strategy, enhance the patient experience for Carney's diverse patient population, and ultimately enhance Carney's capabilities to participate in global, risk-based payment arrangements as described in this project.

Under the first goal are Projects 1.1 and 2.3, the implementation of bilingual, culturally competent community health workers and the use of Clinical and Patient/Family Care Maps. Both initiatives are designed to guide certain vulnerable populations through the care continuum and ensure that they are empowered to seek and access the care they need at the right time, in the right setting. Both initiatives seek to empower typically-disenfranchised, low income patients by enhancing patient communication and providing tools that actively engage patients in a manner that is culturally and linguistically appropriate.

The second goal is addressed by Projects 1.2, 2.1, and 2.2. These projects are focused on care transitions with particular emphasis on Carney's significant elder population. Respectively, the proposed initiatives outline a strategy for engaging post-acute partners for cross continuum care coordination, the implementation of electronic medical records to enhance communication between acute and post-acute providers, and acute care setting education to improve awareness and knowledge regarding geriatric issues and early identification of complications. In conjunction, these initiatives will enable Carney to better manage the total cost and care of its patients, reduce complications, and implement the information technology infrastructure needed to perform under global risk-based payment arrangements.

Collectively, the previous Category 1 and 2 DSTI projects support Carney's long-term vision to serve the Dorchester community as part of Steward's fully integrated, community-based health care system. As an entity, Carney faces unique challenges relative to the rest of the Steward system in engaging its diverse patient population. The proposed projects address this challenge, in addition to beginning to develop the post-acute partnerships necessary to integrate patient care over the entire continuum. With enhanced patient engagement and appropriate post-acute integration and infrastructure, Carney will be able to successfully manage state-sponsored low income patients under global and/or shared savings-type arrangements as described.

Since the proposed initiative addresses state-sponsored low income patients, there is no duplication of funds received via Steward's participation in the Medicare Pioneer program.[39]

Project 3.1: Implement Global Payment Pilot Master Plan Project 3.8		
SFY 2012	**SFY 2013**	**SFY 2014**
3.1.1 (Improvement 1-b1)	**3.1.1** (Improvement 1-b1) **Milestone:** Global payment implementation (num: number of state-subsidized low income patients eligible for reimbursement under global or risk-sharing arrangement; denom: number of state-subsidized low income patients reimbursed under global or risk-sharing arrangement) **Metric:** At least X% of Carney's population of state-subsidized low-income patients will be reimbursed under global or other risk-sharing arrangement (X to be defined pending contract) **Data Source:** Contract documentation	**3.1.1** (Improvement 1-b1) **Milestone:** Global payment implementation (num: number of state-subsidized low income patients eligible for reimbursement under global or risk-sharing arrangement; denom: number of state-subsidized low income patients reimbursed under global or risk-sharing arrangement) **Metric:** X% of Carney's population of state-subsidized low-income patients will be reimbursed under global or other risk-sharing arrangement (X to be defined pending contract) **Data Source:** Contract documentation
3.1.2 (Process 1-b1) **Milestone:** Letter of Intent/Interest **Metric:** Submission of at least one Letter of Intent / Letter of Interest to payer(s) of state-subsidized low-income health care programs for global or other risk sharing contracting program **Data Source:** Letter of Intent/Interest		
3.1.3 (Process 2-b1)	**3.1.3** (Process 2-b1) **Milestone:** Data Use Agreement **Metric:** Signing of Data Use or Data Sharing Agreement **Data Source:** Data Use Agreement	
3.1.4 (Process 8-b1)	**3.1.4** (Process 8-b1) **Milestone:** Global / Risk-Based Payment Agreement **Metric:** Execute agreement for first year of pilot **Data Source:** Global payment /risk-sharing agreement	**3.1.4** (Process 8-b1) **Milestone:** Global / Risk-Based Payment Agreement **Metric:** Execute amended agreement for year two **Data Source:** Global payment / risk-sharing agreement
3.1.5 (Process 5-b1) **Milestone:** Develop materials for enhancing physician / post-acute provider understanding of global / risk-based payment strategies		

[39] Steward is one of only 32 organizations selected nationally as a Medicare Pioneer Accountable Care Organization (ACO), now under a risk-sharing arrangement for approximately 37,000 Medicare beneficiaries.

Project 3.1: Implement Global Payment Pilot Master Plan Project 3.8		
SFY 2012	**SFY 2013**	**SFY 2014**
Metric: Completion of physician outreach / education materials **Data Source:** documentation materials		
3.1.6 (Process 6-b1)	**3.1.6** (Process 6-b1) **Milestone:** Physician outreach / education **Metric:** Number of educational sessions held **Data Source:** documentation of educational sessions	
3.1.7 (Improvement 3-b1)	**3.1.7** (Improvement 3-b1) **Milestone:** Level of risk **Metric:** X% risk-sharing for achieved savings/loss (X to be defined pending contract) **Data Source:** documentation in agreement	**3.1.7** (Improvement 3-b1) **Milestone:** Level of risk **Metric:** X% risk-sharing for achieved savings/loss (X to be defined pending contract) **Data Source:** documentation in agreement

Project 3.2: Participate in a Learning Collaborative
Master Plan Project 3.9

Goal: The goal of this initiative is to support the development of a shared culture of continuous improvement and innovation as well as provide a forum to share lessons learned via the DSTI program with other organizations. By actively participating in a learning collaborative, Steward can share Carney's innovative approach to delivery system transformation with others and facilitate its own efforts to advance the triple aim.

Rationale: Participation in a learning collaborative is a required project to ensure DSTI hospitals to learn from other providers that share similar goals and to capitalize on potential synergies in their efforts.

Program Description: Carney will participate in a learning collaborative organized through the Pioneer ACO program. As a collaborative of the Centers for Medicare and Medicaid Innovation (CMMI), the Pioneer learning collaborative is fully aligned with the triple aim and DSTI transformation objectives. The collaborative consists of weekly calls, in addition to focused, topical "action groups." Steward has been actively participating in several action groups including data analysis, pharmacy care coordination, population health management, HIT, dual eligible care coordination, beneficiary engagement, and provider engagement since February 2012. The weekly calls as well as the action group meetings will provide Steward significant opportunity to engage in collaborative learning regarding strategies and initiatives to drive meaningful delivery system transformation.

Expected Results: Carney will actively engage with the Pioneer learning collaborative over the demonstration period and ultimately will produce a report on "lessons learned" from the collaborative as they relate to Carney's goals within the DSTI program.

Related Projects:
- Project 1.1
- Project 1.2
- Project 2.1
- Project 2.2
- Project 2.3
- Project 3.1

Project 3.2, a mandatory initiative to participate in a learning collaborative, will ensure that Steward is both actively sharing its experiences in all DSTI projects with other providers as well as continuing to implement best practices in its efforts to improve cross continuum tools for patients and providers. Steward will participate in the learning collaborative organized through the Pioneer program so it may both share with and learn from other providers who are similarly poised to transform into accountable care organizations. The many "action group" learning collaborative in the Pioneer program ensure that Steward will have appropriate forums for exchanging lessons learned on all DSTI initiatives including patient engagement, care transitions, electronic medical records implementation, clinical integration and quality improvement, and risk management.[40]

[40] Carney does not receive supplemental funding as part of Steward's Pioneer ACO. Payments through the Pioneer program are reimbursement for Medicare services. Participation in at least one of the many learning collaboratives is a requirement to remain a Pioneer. Steward is currently participating in several of the Pioneer learning collaboratives above and beyond the minimum requirements for the program.

Project 3.2: Participate in a Learning Collaborative Master Plan Project 3.9		
SFY 2012	**SFY 2013**	**SFY 2014**
3.2.1 (Process 1-b1) **Milestone:** Explore opportunities for participating in learning collaborative **Metric:** Document findings on available learning collaboratives **Data Source:** internal hospital documentation		
3.2.2 (Process 2-b1)	**3.2.2** (Process 2-b1) **Milestone:** Select and join a learning collaborative **Metric:** Documentation of joining a learning collaborative **Data Source:** internal hospital documentation	
3.2.3 (Process 5-b1)	**3.2.3** (Process 5-b1) **Milestone:** Participate actively in a learning collaborative **Metric:** Documentation of participation in learning collaborative **Data Source:** internal hospital documentation	**3.2.3** (Process 5-b1) **Milestone:** Participate actively in a learning collaborative **Metric:** Documentation of participation in learning collaborative **Data Source:** internal hospital documentation
3.2.4 (Process 6-b1)		**3.2.4** (Process 6-b1) **Milestone:** Report on lessons learned from participation in a learning collaborative as they relate to Carney's goals under DSTI **Metric:** Lessons learned report **Data Source:** internal hospital documentation

V. Category 4 - Population-Focused Improvements

In addition to the seven Category 1-3 DSTI projects described above, Carney has also committed to reporting 18 measures related to population health in years two and three of the demonstration period (SFY2013 and SFY2014). These 18 measures reflect not only some of the specific elements addressed in Carney's selected projects, but also twelve common measures of population health that may indicate if the proposed DSTI projects are influencing health system outcomes and quality of care. Carney's submission of Category 4 population health measures reflect the broader influence Steward believes the selected projects will have in improving the health of Carney's patient population.

The first table below lists the twelve common measures to be reported by all Massachusetts DSTI hospitals. These measures are designed to monitor the impact of DSTI initiatives on population health for all DSTI program participants.

Category 4 Common Measures[41]				
Measure Description	**Reference**	**SFY2013**	**SFY2014**	**Related Projects / Additional Notes**
4.1: CTM-3	CMS- Care Transitions Measure 3	NA	Report measure	
4:2: ED Wait Time: Door to Diagnostic Evaluation by a Qualified Medical Personnel (OP-20)	Hospital Outpatient Dept. Quality Measures- ED Throughput measure 20	Report measure	Report measure	
4.3: Percent of patients who answer "Always" to the question: Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?	HCAHPS (Q16)	Report measure	Report measure	
4.4: Percent of patients who answer "Always" to the question: Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?	HCAHPS (Q17)	Report measure	Report measure	
4.5: Pneumonia Immunization	CMS IMM-1a	Report measure	Report measure	
4.6: Influenza Immunization	CMS IMM-2	Report measure	Report measure	
4.7: Percent of discharged patients under age 75 who were hospitalized for Chronic Obstructive Pulmonary Disease	COPD Admissions	Report measure	Report measure	
4.8: Percent of discharged patients under age	CHF Admissions	Report	Report	

[41] Hospitals must ensure that sampling procedures consistently produce statistically valid and useful data. If a hospital's denominator population for a given measure is not sufficiently large to produce statistically valid data, then hospitals shall not be required to report the data under Category 4 measures. DSTI hospitals will establish the measurement periods, reporting dates, and remaining details of measurement definitions during state and federal review processes.

75 hospitalized for Congestive Heart Failure		measure	measure	
4.9: AHRQ Low Birth Weight Rate: number of low birth weight infants per 100 births	AHRQ PQI-9	Report measure	Report measure	
4.10: Hospital 30-day, all-cause readmission rate to the index hospital following a hospitalization for patients 18 and older (non-risk standardized, with CMS exclusions)	30-Day Readmits	Report measure	Report measure	
4.11: Percent of Emergency Department visits for children age 18 or less with a primary diagnosis of asthma	Asthma ED	Report measure	Report measure	
4.12: Percent of patients with elective vaginal deliveries or elective cesarean sections at greater than or equal to 37 weeks and less than 39 weeks of gestation completed	Joint Commission PC-01	Report measure	Report measure	

The following table lists Carney's six hospital-specific Category 4 measures. These improvement measures are based on the Master Plan projects selected by Carney in this proposal, and are designed to provide comparability between other DSTI hospitals with similar projects.

Category 4 Hospital Specific-Measures				
Measure Description	**Reference**	**SFY2013**	**SFY2014**	**Related Projects / Additional Notes**
4.13: Frequent User ED Visits	Custom measure	Report measure	Report measure	Project 1.1 Will determine from Amalga database as any patient visiting Carney ED 12 or more times over a twelve month period
4.14: X Percent reduced hospital 30-day all-cause readmissions from prior year baseline	Custom measure (based off CMS final rule)	Report measure	Report measure	Project 1.2 Measure mimics CMS calculation based on Steward data. Numerator, denominator, and exclusions noted below. Numerator: All cause readmissions within 30 days of discharge. Exclusions: Chemotherapy, Radiation Therapy, Rehabilitation, Dialysis, Delivery/Birth, & Death 1st Admit and Planned readmissions for revascularization procedures for PTCA or CABG following inpatient stay for AMI. Denominator Exclusions: 1) patients w/ in hospital death; 2) patients transferred to a short-term hospital; 3) patients who are discharged against medical advice (AMA)
4.15: HCAHPS Discharge Information mean percent	HCAHPS (Compilation of Questions 18, 19, & 20)	Report measure	Report measure	Project 2.1 Percent of time patient choose "always" regarding survey questions on discharge information over other likert scale options
4.16: Falls (with injury) per thousand patient days	Custom measure -	Report measure	Report measure	Project 2.2

	Reported to Incident Reporting System			Based on finalized data out of the RL Solutions incident reporting system. Injury defined as a disruption of structure or function of some part of the body as a result of the fall.
4.17: 30-day all-cause readmissions	Custom measure (based off CMS final rule)	Report measure	Report measure	Project 2.3 Measure mimics CMS calculation based on Steward data. Exclusions below. Numerator: All cause readmissions within 30 days of discharge. Exclusions: Chemotherapy, Radiation Therapy, Rehabilitation, Dialysis, Delivery/Birth, & Death 1st Admit and Planned readmissions for revascularization procedures for PTCA or CABG following inpatient stay for AMI. Denominator Exclusions: 1) patients w/ in hospital death; 2) patients transferred to a short-term hospital; 3) patients who are discharged against medical advice (AMA)
4.18: Percent of aligned patient population reimbursed under global payment arrangement	Custom measure	Report measure	Report measure	Project 3.1 Will depend on contract with Medicaid and alignment methodology

VI. Distribution of DSTI Funds

The funding allocation table below specifies available DSTI funds on the basis of Steward Carney hospital achievement and reporting of the projects and metrics identified in this proposal in compliance with Section VIII(20) of the Master Plan. Steward Carney's proportional allotment factor is equal to 0.0306, with total target funding of approximately $19.2 million over the three year demonstration period.

Delivery System Transformation Initiatives – *Steward Carney Hospital*

Steward Carney Hospital

DSTI Proportional Allotment Factor: 0.0306

50% Allotment upon Plan Approval **$3,202,800**

DY15/SFY12			DY16/SFY13			DY17/SFY14		
CATEGORY, PROJECT, METRIC	**Optional Adjustment (%)**	**Value**	**CATEGORY, PROJECT, METRIC**	**Optional Adjustment (%)**	**Value**	**CATEGORY, PROJECT, METRIC**	**Optional Adjustment (%)**	**Value**
Category 1 Integration			**Category 1 Integration**			**Category 1 Integration**		
Base Value		**$3,349,333**	**Base Value**		**$5,024,000**	**Base Value**		**$5,024,000**
Carney Base		$102,490	**Carney Base**		$153,734	**Carney Base**		$153,734
Project 1.1			**Project 1.1**			**Project 1.1**		
Base Value Adjusted for # Metrics		$170,816	**Base Value Adjusted for # Metrics**		$192,168	**Base Value Adjusted for # Metrics**		$153,734
1.1.1		$170,816	1.1.4		$192,168	1.1.5		$153,734
1.1.2		$170,816	1.1.6		$192,168	1.1.6		$153,734
1.1.3		$170,816	1.1.8		$192,168	1.1.7		$153,734
			1.1.10		$192,168	1.1.9		$153,734
						1.1.10		$153,734
Project Subtotal		$512,448	Project Subtotal		$768,672	Project Subtotal		$768,672
Project 1.2			**Project 1.2**			**Project 1.2**		
Base Value Adjusted for # Metrics		$256,224	**Base Value Adjusted for # Metrics**		$384,336	**Base Value Adjusted for # Metrics**		$384,336
1.2.1		$256,224	1.2.2		$384,336	1.2.3		$384,336
1.2.4		$256,224	1.2.4		$384,336	1.2.4		$384,336
Project Subtotal		$512,448	Project Subtotal		$768,672	Project Subtotal		$768,672
Category 2: Innovations			**Category 2: Innovations**			**Category 2: Innovations**		
Base Value		**$3,349,333**	**Base Value**		**$5,024,000**	**Base Value**		**$5,024,000**
Carney Base		$102,490	**Carney Base**		$153,734	**Carney Base**		$153,734
Project 2.1			**Project 2.1**			**Project 2.1**		
Base Value Adjusted for # Metrics		$85,408	**Base Value Adjusted for # Metrics**		$192,168	**Base Value Adjusted for # Metrics**		$192,168
2.1.1		$85,408	2.1.2		$192,168	2.1.2		$192,168
2.1.3		$85,408	2.1.5		$192,168	2.1.5		$192,168
2.1.4		$85,408	2.1.6		$192,168	2.1.6		$192,168
2.1.5		$85,408	2.1.7		$192,168	2.1.7		$192,168
2.1.6		$85,408						

2.1.7		$85,408
Project Subtotal		$512,448
Project 2.2		
Base Value Adjusted for # Metrics		$170,816
2.2.1		$170,816
2.2.4		$170,816
2.2.8		$170,816
Project Subtotal		$512,448
Project 2.3		
Base Value Adjusted for # Metrics		$73,207
2.3.1		$73,207
2.3.3		$73,207
2.3.4		$73,207
2.3.5		$73,207
2.3.6		$73,207
2.3.9		$73,207
2.3.11		$73,207
Project Subtotal		$512,448
Category 3: Payment Reform		
Base Value		**$3,349,333**
Carney Base		$102,490
Project 3.1		
Base Value Adjusted for # Metrics		$256,224
3.1.2		$256,224
3.1.5		$256,224

Project Subtotal		$768,672
Project 2.2		
Base Value Adjusted for # Metrics		$153,734
2.2.2		$153,734
2.2.3		$153,734
2.2.5		$153,734
2.2.6		$153,734
2.2.8		$153,734
Project Subtotal		$768,672
Project 2.3		
Base Value Adjusted for # Metrics		$76,867
2.3.1		$76,867
2.3.2		$76,867
2.3.3		$76,867
2.3.4		$76,867
2.3.5		$76,867
2.3.6		$76,867
2.3.7		$76,867
2.3.9		$76,867
2.3.10		$76,867
2.3.11		$76,867
Project Subtotal		$768,672
Category 3: Payment Reform		
Base Value		**$5,024,000**
Carney Base		$153,734
Project 3.1		
Base Value Adjusted for # Metrics		$153,734
3.1.1		$153,734
3.1.3		$153,734
3.1.4		$153,734
3.1.6		$153,734

Project Subtotal		$768,672
Project 2.2		
Base Value Adjusted for # Metrics		$128,112
2.2.2		$128,112
2.2.3		$128,112
2.2.6		$128,112
2.2.7		$128,112
2.2.8		$128,112
2.2.9		$128,112
Project Subtotal		$768,672
Project 2.3		
Base Value Adjusted for # Metrics		$69,879
2.3.1		$69,879
2.3.2		$69,879
2.3.3		$69,879
2.3.4		$69,879
2.3.5		$69,879
2.3.6		$69,879
2.3.7		$69,879
2.3.8		$69,879
2.3.9		$69,879
2.3.10		$69,879
2.3.11		$69,879
Project Subtotal		$768,672
Category 3: Payment Reform		
Base Value		**$5,024,000**
Carney Base		$153,734
Project 3.1		
Base Value Adjusted for # Metrics		$256,224
3.1.1		$256,224
3.1.4		$256,224
3.1.7		$256,224

			3.1.7		$153,734			
Project Subtotal		$512,448	Project Subtotal		$768,672	Project Subtotal		$768,672
Project 3.2: Learning Collaborative			**Project 3.2: Learning Collaborative**			**Project 3.2: Learning Collaborative**		
Learning Collaborative Base Value		**$837,333**	**Learning Collaborative Base Value**		**$1,256,000**	**Learning Collaborative Base Value**		**$1,256,000**
Carney Base		$25,622	**Carney Base**		$38,434	**Carney Base**		$38,434
Base Value Adjusted for # Metrics		$128,112	**Base Value Adjusted for # Metrics**		$96,084	**Base Value Adjusted for # Metrics**		$96,084
3.2.1		$128,112	3.2.2		$96,084	3.2.3		$96,084
			3.2.3		$96,084	3.2.4		$96,084
Project Subtotal		$128,112	Project Subtotal		$192,168	Project Subtotal		$192,168
Category 4: Population Health			**Category 4: Population Health**			**Category 4: Population Health**		
Annual Metric Base Value		N/A	**Annual Metric Base Value**		**$3,078,431**	**Annual Metric Base Value**		**$2,907,407**
Metric Base Value Adjusted for Proportional Allotment Factor		N/A	**Metric Base Value Adjusted for Proportional Allotment Factor**		$94,200	**Metric Base Value Adjusted for Proportional Allotment Factor**		$88,967
Base Value Adjusted for # Metrics		N/A	**Base Value Adjusted for # Metrics**		$94,200	**Base Value Adjusted for # Metrics**		$88,967
# Measures Reported		N/A	# Measures Reported		17	# Measures Reported		18
Category 4 Subtotal		$0	Category 4 Subtotal		$1,601,400	Category 4 Subtotal		$1,601,400
DY15/SFY12 Total		**$6,405,600**	**DY16/SFY13 Total**		**$6,405,600**	**DY17/SFY14 Total**		**$6,405,600**