JOHNS HOPKINS BAYVIEW MEDICAL CENTER STRATEGIC HOSPITAL TRANSFORMATION PLAN CY16-18

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Background

In December of 2009, a Johns Hopkins health system (JHHS) wide taskforce was created to begin to transform acute patient care delivery in order to achieve the "triple aim" of "better health, better care and lower cost." The recommendations from this taskforce were translated into the JHHS "care coordination bundle" informed by CMS demonstration projects and emerging evidence that individual interventions targeting a single aspect of care delivery tended to have limited impact on utilization rates, and that bundled interventions fostering coordinated care processes may have significant impact on care delivery, quality outcomes, and utilization. The basic premise that ALL hospitalized patients were at risk for untoward events or suboptimal transitions back to their prior setting was the foundation for the development of acute illness specific strategies included in the bundle with distinct interventions employed for those patients identified as high risk through the use of validated screening tools and other assessment methods. The model engages all healthcare providers in a "Transdisciplinary" approach to care delivery with the goal of realigning processes of care and roles around the patient and throughout the healthcare continuum while maximizing workforce synergies with increased accountability for patient outcomes.

The implementation of these strategies began in earnest in April of 2011 with the initiation of pilot units across all of the JHHS hospitals. Early support for approaches that were incremental to normal Johns Hopkins Bayview Medical Center (JHBMC) hospital operations was funded by seed money from the HSCRC Admission/Readmission Reduction Program and subsequently sustained and grown from the attainment of a Center for Medicare Medicaid Innovation (CMMI) award that provided increased support for care coordination across the healthcare continuum. The targeted populations for intervention were ALL hospitalized patients and vulnerable Medicare and Medicaid patients from the 7 zip codes surrounding the East Baltimore and Bayview Campuses.

Over the 3 years of the CMMI award, the JHBMC care coordination bundle was implemented for adult inpatients as well as outpatients served in the Emergency Department. The patient-centered care coordination concepts were embedded in the Johns Hopkins Medicine Strategic Plan and continue to be evaluated, modified and expanded as new evidence emerges and our own experience and outcomes analysis inform our strategies. The "bundle" addresses care coordination that transcends the inpatient setting and is focused on transitional care strategies to return patients to their optimal level of health.

Early Outcomes

Our experiences over the last five years in improving care delivery have yielded positive outcomes as well as helped to inform us of the challenges in implementing cross continuum care coordination processes and the identification of factors that influence the success of these strategies. Risk screening tools are highly effective, but low sensitivity requires the use of other methods to augment appropriate patient identification. Patients identified as "high risk" fit a multitude of profiles which do not necessarily suggest a specific collection of chronic conditions, socio-economic disparities, or payer, but reflect other variables not easily measured by severity of illness or other indicators available through administrative data. The definition of what constitutes "high risk" is critical in determining appropriate interventions at the right juncture in the health illness continuum. The current literature expands on the concept that the characteristics of patients most at risk for increased utilization include such factors as patient activation and healthcare literacy, social support at home, functional status as well as type and amount of disease burden.

From FY 2014—2015, of the 28,133 JHBMC eligible adult discharges, 48% received a high intense care coordination intervention in addition to the standard care coordination bundle for all patients. Of the patients who received high intense interventions (as identified by risk), 62% were Medicare, and 18% were Medicaid or Medicaid Managed care. Two of our major strategies for post-acute follow-up include post-discharge phone calls for all patients returning home (without home care), and home visits by a Registered Nurse "*Transitions Guide"* for our highest risk patients. For both of these programs, adjusted data demonstrate a significant reduction in readmissions for those who received the intervention versus those who could not be reached or refused the intervention. Propensity analyses of these interventions highlight the inherent challenges in improving readmission and utilization rates at JHHS. The variables that are associated with higher readmission rates are also the same variables that predict whether a patient will be successfully reached by one of the care coordination interventions. In other words, the precise people that we want to reach with our interventions are the patients we are least likely to reach. These results highlight the importance of patient engagement in driving change.

Community Health Needs Assessment and Healthy Baltimore 2015 Priorities

The most recent JHBMC Community Health Needs Assessment identifies the health needs of our community as: Adult and childhood obesity; Addiction and mental health problems in adults and children; the sequelae of chronic illness; and access to care for Spanish and non-English speaking individuals. These problems are clear in our work on hospital readmissions and ED utilization where patients with heart failure, COPD, diabetes, heart disease, addictions and mental illness are those most often readmitted to the medical center. The JBMC leadership has encorporated our learning from our readmissions work, the evidence from the CHNA and the guidance from Healthy Baltimore to create the strategic plan for transformation summarized below.

Moving forward—The Strategic objectives

Our work in transforming patient care delivery through a model for care coordination has yielded positive results and improved clinical outcomes in numerous domains. Both internal and external (CMS) early evaluation has demonstrated a statistically significant decrease in 30 day readmissions as well as total cost of care for Medicare beneficiaries in the 90-days following discharge.

Building on this success, JHBMC will continue to redesign care delivery systems to improve accessibility, to foster patient and family engagement, and to build on current and future partnerships with community organizations to meet the needs of our patient population. The JHBMC strategies support these three areas of transformation.

- **Access to Care**: Improving access to primary care, specialty care, and urgent care. Particularly, for patients and families with high risk, chronic illness, including addictions and mental health.
- **Care Coordination Across the Continuum**: Includes focusing on patients with high-risk conditions and deploying strategies for patient/family engagement and care.
- **Quality and Efficiency:** Improving quality and efficiency of inpatient, outpatient and emergency department care through implementation and monitoring of clinical best practices for high risk populations.

The Johns Hopkins Bayview Medical Center's three-year rolling strategic plan to support care coordination and population health builds on the considerable progress that has been made in these

arenas and positions the institution to meet new challenges as the role of the hospital continues to evolve. Our strategic goals are designed to sustain successful initiatives and fill gaps in the care continuum that hamper our ability to ensure seamless transitions. We will review all future plans against these objectives and will analyze data from their implementation to design programs that promote better patient outcomes. The strategic alignment of our goals to those of the State of Maryland is illustrated in **Appendix A**.

Strategic Priority #1: Access to Care

Medicaid expansion under the Affordable Care Act has added more people with complex health needs to the mix of patients seeking hospital and ambulatory care. Access to timely, appropriate and high quality primary, specialty and urgent care is critical to optimizing health of the patients that we serve and minimizing disparities based on race/ethnicity, community of residence or economic status. Our strategies to address this challenge include linking patients to primary care, and expanding service hours to meet growing demand.

Strategies:

Timeline	
CY 16	**Formalize partnership with Patient First** to provide urgent access to care for those who normally visit the ED for urgent and primary care needs. This access is intended to fill a bridge to primary care or a short term need for limited acute conditions.
	Target population: Adult patients discharged from the Medical Center without a medical home and patients who frequently utilize the ED for routine care.
	Outcome Measures: Reduce potentially avoidable hospital and emergency department visits.
	Financial Sustainability: HSCRC Care Coordination Infrastructure investment and GBR cost savings.
CY16-17	**Expand primary care capacity on campus** – Partnership with Johns Hopkins Community Physicians, Johns Hopkins School of Medicine Comprehensive Care Practice and Division of Geriatric Medicine physician house call program to provide extended hours and capacity for high risk patients.
	Target population: Adults with chronic illness needing primary care medical homes including frail homebound Medicare beneficiaries and those with addiction and mental health comorbidities.
	Outcome Measures: Reduce potentially avoidable hospital and emergency department visits; numbers of clinic visits for targeted patient groups.
	Financial Sustainability: HSCRC Care Coordination Infrastructure investment and GBR cost savings. HSCRC Regional Partnership Grant

CY16-17	**Expand specialty care capacity to support patients with heart failure, COPD and addictions** with emphasis on access to appointments for patients transitioning between hospital, ED, nursing facilities and home.
	Target population: Adults with COPD, heart failure and addictions
	Outcome Measures: Reduce potentially avoidable hospital and emergency department visits, time to next available appointment, number of clinic visits
	Financial Sustainability: HSCRC Care Coordination Infrastructure investment and GBR cost savings.

Strategic Priority #2 Care Coordination across Care Settings

A bundle of evidenced-based transitional care strategies paired with a multidisciplinary team of embedded staff across the continuum of care are key ingredients in our recipe to improve health outcomes and reduce potentially avoidable utilization.

Strategies:

Timeline	
CY16-17	**Maintain expanded care coordination "Bundle" (Appendix B)-** Expand existing 30 - day transition guide post-acute program to include 90 day follow-up to focus on patient/family education engagement, and self-efficacy for patients with high risk conditions, i.e. Heart Failure & COPD.
	Target population: Adult patients with high risk conditions
	Outcome Measures: Reduce potentially avoidable hospital and emergency department visits.
	Financial Sustainability: HSCRC Care Coordination Infrastructure investment and GBR cost savings.
CY16-17	**Implement Behavioral Health Community Bridge** program that will accept patients from acute hospital, ED and primary care practices who are in urgent need of ongoing addiction and mental health services. The bridge program will assess, coordinate, provide outreach and ensure patients are enrolled in needed services. Services can be provided for up to 4 months and will be coordinated with Behavioral Health Services of Baltimore City, Helping Up Mission, and HealthCare for the Homeless.
	Outcome Measures: Reduce potentially avoidable hospital and emergency department visits.

	Financial Sustainability: HSCRC Care Coordination Infrastructure investment and GBR cost savings, HSCRC Regional Partnership Grant.
CY16-17	**Patient Navigator Services** –Community health workers/patient navigators will be positioned in ED to assist patients in connecting with social services resources in the community. It is well documented that the social determinants of health can represent significant barriers to better health outcomes. This intervention will connect patients with insurance, housing, transportation and other resources. A principle partner in this effort is the United Way of Central Maryland.
	Target population: Adult ED patients who utilize ED for primary care
	Outcome Measures: Reduce potentially avoidable hospital and emergency department visits.
	Financial Sustainability: HSCRC Care Coordination Infrastructure investment and GBR cost savings.
CY 16 - 18	**Caregiver Support -** Across the continuum of care, caregivers provide significant care and support to patients and families. The formal care delivery system has long ignored the significant contribution of caregivers to the health and well-being of our patients. Bayview has launched and will continue to expand a program to support caregivers, "Called to Care" program. This program is partnered with the Bridge to Home program as an integral strategy in our care coordination bundle.
	Target population: All caregivers of patients in the inpatient and outpatient settings.
	Outcome measures: Numbers of caregivers enrolled/served, number of support services accessed.
	Financial Sustainability: Bayview has received a $1.5 million, three year award from the Weinberg foundation to support this work and will continue to seek refunding at the end of the initial grant period

Strategic Priority #3 Quality and Efficiency:

To improve the quality and efficiency of inpatient, outpatient and emergency department care through implementation and monitoring of clinical best practices for high risk populations. In short, providing the necessary care in the most appropriate setting at the time needed for the patient based on the best clinical evidence available.

Strategies:

Timeline	
CY16 -18	**To broadly implement the use of Business Intelligence tools** to identify areas of opportunity and implement best practices in caring for high risk patients. These tools support near real time identification of patients and near real time monitoring and feedback on care provided. These processes have demonstrated reduction in waste while achieving improved outcomes for patients.
	Target population: Populations of patients with variances in care delivery and high risk for utilization of inpatient and ED resources. Most often these include those with chronic medical and behavioral health conditions.
	Outcome Measures: Reduce potentially avoidable hospital and emergency department visits.
	Financial Sustainability: HSCRC Care Coordination Infrastructure investment and GBR cost savings.
CY 16-17	**Implement campus wide smoking cessation program** with goal of improving patient health outcomes.
	Target population: Adults with chronic medical condition and those with elective surgical procedures.
	Outcome Measures: Reduce potentially avoidable hospital and emergency department visits.
	Financial Sustainability: HSCRC Care Coordination Infrastructure investment and GBR cost savings.
CY 16-18	**To expand the skilled nursing collaborative** beyond the 5 current facilities for the purposes of adopting best practices with heart failure, COPD, sepsis, arrhythmias and Behavioral disorders.
	Target population: Patients discharged from the Medical Center to local skilled nursing facilities.
	Outcome Measures: Reduce potentially avoidable hospital and emergency department visits.
	Financial Sustainability: HSCRC Care Coordination Infrastructure investment and GBR cost savings. HSCRC Regional Partnership Grant

Conclusion

The Johns Hopkins Bayview Medical Center is uniquely positioned to succeed in the continually evolving U.S. health care and to transforming into a model 21st century Academic Medical Center. The historic, episode-financed hospital model largely focused on treating those who are acutely ill, is no longer viable. The future hospital must serve their neighbors and patients across the care continuum with a culture of safety, quality, equity, efficiency and financial stewardship. In proactively addressing these priorities, Johns Hopkins Bayview Medical Center strives to be at the forefront in re–envisioning and operationalizing the model of the modern academic medical center in the 21st century.