



Proposal for PTAC

Oncology Bundled Payment Program Using CNA-Guided Care

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Physician-Focused Payment Model Technical Advisory Committee
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To: The Physician Focused Payment Model Technical Advisory Committee

Hackensack Meridian Health and Cota are requesting a review of the proposal for an Oncology Bundled Payment Program using Cota's CNA-Guided Care. CNA Guided Care™ enables health systems to optimize bundled payments and treatment lane selection with the intent of reducing adverse variance, improve clinical outcome, and reduce total cost of care. We propose to launch a bundled payment oncology program with traditional Medicare patients at HMH, and we envision that CNA-Guided Care™ can be expanded to other disease areas at HMH and beyond.

Sincerely,

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Abstract

Among all fields of medicine, oncology is one of the most rapidly evolving and is associated with high variability in clinical outcomes and resource utilization, in part leading to, unsustainable increases in total cost of care. “Adverse variances in care” (too much and too little care) estimated to result in 30% of unnecessary expenditures¹ and sub-optimal clinical outcomes for those affected; which, if adverse variance is identified and prevented, would result in substantial savings in total cost of care and improvement of clinical outcomes for the population being served. Cota, a precision analytics data company, utilizes a patented digital classification system that assigns a numeric code to a patient’s manifestation of disease, a code which characterizes all relevant historical, demographic and biologic (including genomics) information about the patient and their disease, as well as the type of therapy intent (i.e. adjuvant vs. neoadjuvant) and progression status. This enables the identification of adverse variance for targeted prevention or intervention. In using the CNA classification system, patients with identical CNAs can be grouped and compared for clinical and cost outcomes based on treatment chosen by provider. In multiple clinical settings using real world evidence, Cota has demonstrated that by identifying adverse variance, behavior modification of providers follows, leading to less adverse variance and a corresponding improvement in relevant clinical cancer outcomes, including survival and in total cost of care. Several payers, hospital systems, physician networks and life sciences currently utilize the Cota’s CNA system to facilitate outcome improvements and total cost of care reductions.

Hackensack Meridian Health (HMH), a 13-hospital healthcare system in New Jersey with a large cancer population, seeks to leverage Cota’s technology to assist in the transformation from fee for service to value based reimbursement with its traditional Medicare population, beginning in oncology. The HMH Oncology Payment Program (also referred to as bundles and lanes program) is an alternative payment model developed by HMH and Cota, in partnership with a major payer, to improve relevant clinical outcomes and reduce the total cost of care of oncology patients starting with the most common cancers (breast, colon, rectal and lung cancer). HMH has designed 27 bundles that encompass the care for patients with all stages and presentations of these cancer types. HMH, Cota and our payer partner have conducted a three year retrospective analysis to determine the historic CNA, and treatment care plan “lane” for all patients to define the clinical and total cost of care baseline for each patient. Without the precision of the CNA diagnosis, in common practice bundle and lane assignment varies considerably, leading to adverse variance. In learning from the CNA coding system, Cota and

¹ Berwick; JAMA 2012

HMH have compared clinical and total cost of care outcomes retrospectively at a level of precision unfeasible using traditional classification systems (e.g. ICD-10). In the program with the payer, we plan to prospectively assign CNA at diagnosis and use CNA Guided Care™ to optimize bundle and lane selection with the intent of reducing adverse variance to improve clinical outcomes and reduce total cost of care. In this proposal, we seek to expand this program to traditional Medicare patients at HMH.

I. Background and Model Overview

The Hackensack Meridian Health (HMH) and COTA Inc. Physician-Focused Payment Model (PFPM) will seek to optimize relevant clinical outcomes while reducing total cost of care for the population HMH will serve in the Bundle and Lanes program. The PFPM will feature an oncology bundled payment model in which care choices are modulated by the prior outcomes of similar patients drawn from real world data, a process known as Cota Nodal Address (CNA) Guided Care™.

The PFPM will utilize a bundled pricing model for Medicare cancer patients at HMH. The bundled payment will encompass all payments for an oncology episode over a fixed time period, including medical, radiation, surgical oncology, pharmacy, diagnostic, technical and inpatient/outpatient fees associated with the episode. HMH will leverage COTA's patented CNA system, a digital expression of all attributes specific to the patient and their disease that affect clinical outcomes and total cost of care. The system, developed by expert clinicians and based on peer-reviewed literature, organizes data about cancer patients to arrive at homogenous groupings of patients to enable big data analysis.

Our objective is to optimize the clinical outcomes of each individual patient and reduce total cost of care for the HMH population served. Clinical outcomes include efficacy (e.g. complete and partial response rates and time to best response), durability (e.g. progression free and overall survival), safety (e.g. incidence and severity of toxicity), quality of life (e.g. performance status and quality of life) and survivorship (e.g. including end of life care). In understanding clinical treatment variations for patients with the same CNA, we can reduce unnecessary expenditures by eliminating adverse variance (too little or too much care) and improve clinical outcomes for each patient. If the model succeeds in achieving improved clinical outcomes and lower total cost of care HMH will continue to expand for all oncology patients, regardless of insurer.

Moreover, HMH has created a model for "building bundles" which standardizes diagnostic evaluation and therapeutic intervention using defined schedules, based on best practices. Once verified by this demonstration, HMH can utilize this model of "bundle building" to standardize bundles for many disease processes beyond oncology.

II. Scope of Proposed PFPM (High Priority Criterion)

The HMH health system spans New Jersey and encompasses the services for comprehensive oncology care, including dedicated oncologists, 13 inpatient hospitals, 6500 employed and affiliated physicians, phase 1 and robust clinical research units, home health, rehabilitation clinics, skilled nursing, and mental health facilities. HMH has the operational and clinical infrastructure necessary to implement the program. HMH has a rapidly growing clinically integrated physician network (CIN) with over 2000 physicians currently participating, and anticipated to grow to in excess of 5000.

Medicare-defined Eligible Professionals with admitting privileges in the HMH health system with attributed Medicare patients with breast, colon, rectal, or lung cancer who participate in the CIN will be incorporated in this PFPM. This group of physicians has participating agreements with HMH, and encompasses an estimated 86 medical oncologists, 17 radiation oncologists and 40 surgical oncologists. These professionals are supported by other CIN members including, but not limited to, primary care, gastroenterologists, pulmonologists, nephrologists, dermatologists, geneticists, gynecological oncologists and reconstructive surgeons. In total, there are approximately 1,026 staff members associated with oncology. This number will scale as more cancer types are added.

The rationale for initiating with physicians that are members of the HMH CIN is multifactorial. This enables provision of a continuum of care that is prepared for the variety of care settings necessary for comprehensive oncology care. In addition, the HMH CIN monitors quality metrics of all its members with recommendations for care standardization across all specialties. With a comprehensive bundled payment for all care settings, the hospital and its physicians can better direct patients to the correct care setting without a financial or administration implication for one care setting over another.

Leadership from oncology and other specialties that manage oncology patients have indicated enthusiasm and willingness to participate in an oncology bundled payment program. Moreover, the CIN is based on a platform that currently has multiple risk sharing contracts which offer benefits to participating providers.

This model would initially only apply to physicians participating in the CIN at Hackensack Meridian Health, which include the 143 oncologists of 2000 total physicians. If expanded to scale, then all physicians affiliated with Hackensack Meridian Health's CIN would be included in the model. There are 100 affiliated physicians that manage oncology patients that are not currently members of the CIN. An estimated 2,500 – 3,000 patients would be eligible for the PFPM in its initial stage with select cancers, with up to 9,000 patients eligible at scale.

Hackensack Meridian Health would receive the prospective payment on behalf of all the physicians participating in the PFPM. HMH would bear the risk of the bundled payment. Then, HMH would distribute payment to physicians in accordance with services rendered, based on fair market value, agnostic to physician employment, if they are a member of the CIN.

A component of compensation will be incentive-based. Compensation for physicians contracted by HMH and participating in the PFPM would be dependent on 1. Services provided, 2. Achievement of clinical quality and patient satisfaction outcomes and 3. Total cost of care. Once the program is expanded beyond the initial physician group, the compensation and incentive model would follow a similar process for physicians joining the CIN of Hackensack Meridian Health. Currently there are no HMH incentive programs in place for physicians affiliated with HMH that are not part of the CIN or one of the HMH ACOs. The objective for such an incentive for affiliated physicians would be to encourage a transition to value based care.

Experience with Programs

A pilot program is currently in development with a managed care plan for oncology patients with Commercial and Medicare Advantage insurance. This program is slated to commence in the second half of 2017. This program is a prospective bundled payment for oncology care, covering four cancers (breast, colon, lung and rectal) across 27 categories for bundled payment.

HMH also has over 20 years of experience with its prospective bundled payment arrangement for bone marrow transplant patients. HMH administers this program by accepting a global transplant payment from commercial insurers, then the physician fees are paid from this pool per pre-arranged rates for physicians that have agreed to provide services to patients in this alternative payment model.

Feasibility of Program for Small Practices

In the experience of the HMH transplant bundled payment program, HMH receives payments on behalf of independent practices. The small practices are then compensated for their services by HMH. The arrangement in an oncology bundle program would be similar, with an added upside-only risk component. HMH expects to bear the financial risk for the prospective bundled payment. HMH will then administer an incentive program with oncologists in an upside-only risk arrangement. The potential incentive pool will be proportionate to the level of risk borne by the practice. This will be feasible for the oncologists because they would only bear the risk of a small number of their patient panels – only patients with certain cancers that have traditional Medicare. On average, each oncologist has approximately 36 patients in the program (2,500 patients across 143 oncologists participating in the CIN).

Patient Population & Impact of PFPM on Patients

The initial patient population will include all newly diagnosed breast, colon, rectal, and lung cancer. HMH diagnoses approximately 2,500- 3,000 new cases a year with these cancers. In total, HMH diagnoses approximately 9,900 cancer patients per year.

HMH intends to leverage Cota's patented CNA system to accurately and precisely diagnose each patient's type of cancer. The CNA encompasses all the relevant clinical attributes that comprehensively describe the specific type of cancer manifestation, such that patients with the same CNA have clinically indistinguishable disease.² Only patients with a CNA will be enrolled into the PFPM. HMH expects patients to benefit from CNA-Guided Care™ for the following reasons:

First, assigning CNA standardizes the approach to diagnosing patients and reduces discrepancies in a timely, complete initial workup. For example, CNA assignment requires the patient to have had certain genetic tests and performance assessment (ECOG). An oncologist would need to capture all the relevant pieces of information before a patient is enrolled into the bundle and lanes program and eligible for any of the incentives or payments related to the PFPM.

Second, the precision will help inform the treatment "lane" that is selected for the patient, a pre-determined set of treatment care protocols designed to minimize adverse variance in care for patients based on a three year retrospective baseline. Thus based on prior clinical outcome and total cost of care by CNA, providers can optimize bundle and lane selection (the precise care plan) for each individual patient. This helps reduce the possible set of treatment options at the point of care to the handful that have demonstrated to have optimal response and outcomes for that patient – all as dictated by the patient's characteristics and specific disease as encoded by the CNA.

Third, HMH and Cota expect patients to benefit because a bundled payment model creates the conditions that allow care coordination and other case management processes to thrive, which help patients several ways, including improved adherence to treatment medications, prompt medical attention by a member of their dedicated care team, and the ability to make better and more informed decisions about their care. With a lump sum payment, a portion of the payment can be set aside to compensate for traditionally un- and under-compensated activities that improve patient care and outcomes, for example case management by HMH, patient outreach for adherence and at-risk patients, and as appropriate, transportation for home-bound patients.

HMH expects to protect against underutilization because, through this program, all

² J CLIN ONCOL. 2015; 33 (suppl): ABSTR E17699

clinical aspects of patient care are defined for physicians to select from and these will be tracked with compliance through Epic and reported by Cota. Processes for patient care will include diagnostics, imaging, surgery, chemotherapy, physician visits – including follow up care, comorbidity management and routine care management. HMH will protect against denial of needed care by ensuring compliance with a wide set of quality measures (outlined in the next section). Providers will need to meet a variety of quality and outcomes measures to assess performance. If quality measures are met, then patients will have received the care that they need.

HMH expects the bundled payment arrangement to protect against overutilization of care because each individual service rendered will not trigger a paid claim, reducing the incentive for over-provision of services. Incentives will be focused on the quality and outcomes of the patient, with physician behavior contributing to the maximization of performance along those metrics.

Through Cota, HMH will monitor for any unforeseen unintended consequences. Cota will track both encounters (as reported to Medicare) and the clinical progression of patients through Cota's data ingestion platform.

Impact on Medicare Spending & Other Public Programs

Cota and HMH expect total cost of care spending for the whole patient population to decrease. There will be increased expenditures at the patient level for some patients with a CNA identified previously to have underutilized care services (i.e. proper genetic diagnostic testing). We anticipate this will be offset by saving on total cost of care for more patients in whom care was over-utilized particularly end of life, emergency room visits and unnecessary hospitalizations. HMH currently participates in a Medicare Shared Saving Program and have developed workflows to optimize care while minimizing waste. By utilizing these workflows in conjunction with the HMH bundle protocols, all aspects of patient care can be managed efficiently.

HMH does not expect this pilot to directly impact other groups of beneficiaries. If successful on the pilot group of oncology patients the model can be replicated across other disease areas.

Moreover, if this is a successful pilot with an oncology bundled payment model then HMH and Cota will aim to approach other managed care entities to help construct similar programs.

III. Quality and Cost (High Priority Criterion)

Expected Cost Impact

Per our forecast, HMH and Cota expect total costs to be reduced by 10-15% for the whole population served. In pre-identifying adverse variance at the CNA level case management programs will prospectively monitor for and avoid adverse variance. In assigning CNA before care begins and then through care coordination to avoid too little or too much care (adverse variance), we believe clinical outcomes will be optimized for all patients and total cost of care will be reduced for the population served.

HMH will ensure quality through a rigorous set of measures that we plan to track, monitor and share with providers and patients.

Potential Barriers

One potential barrier to the model's success may include ancillary provider buy-in. For example, this model will rely on carefully coordinated diagnostic and pathologist commitment to provide timely interpretation of specimens for diagnosis. Because this is a key factor in contributing to a smooth working process, HMH is addressing this directly through robust education initiatives and training programs targeting such clinicians. See Appendix D for the education plan HMH will implement for this program.

HMH may also encounter risks in achieving full visibility into measure performance, particularly among ancillary physicians. This risk can be mitigated by building into Epic dashboards for measure management for the quality metrics listed in Appendix A. Additionally, these dashboards will be made available for all providers in HMH. Legacy Meridian providers will have access to the dashboard once Epic installation at those centers is complete by early 2018.

Finally, through the HMH experience with the Medicare Shared Savings Program (ACO) a major identified risk to success is "leakage" and noncompliance. HMH plans to overcome this obstacle with close care coordination, utilizing face to face, phone, telehealth, and messaging, as well as using Medicare-provided, real-time claims data to reduce adverse variance stemming from avoidable leakage outside of the HMH system.

Systems for Performance Assessment & Innovative Models for Assessment

HMH expects to follow several nationally accepted quality programs, including QOPI, OCM and GPRO. As part of the MSSP program, HMH utilizes an outside vendor to monitor patient satisfaction. This will be added to the Bundle program. Moreover, Cota will be monitoring patient outcomes.

All measures are listed in Appendix A.

This model will be underpinned by CNA-Guided Care™, an innovative, novel approach to applying precision medicine to optimize outcomes at the patient level while reducing total cost of care at the population level. The CNA incorporates the specialty-specific attributes to classify patients into precise groups. Oncology has been mapped by the CNA, as well as other specialty areas including behavioral health, cardiology, and orthopedics. Because the CNA was created by specialists and for specialists, the methodology reflects what is important to the clinician at the point of care and for patient treatment, unlike traditional methods for classifying disease such as ICD-10. The CNA encompasses all the relevant clinical inputs to precisely classify a patient.

Data Required for Program

HMH is currently co-developing a dashboard with Cota so that HMH physicians will have full view of total and unit cost of care, resource utilization, and clinical quality metrics.

Cota will provide a dataset to HMH that will merge the CNA of the patients with the corresponding clinical data and costs associated through claims.

Through this program, HMH, Cota and CMS will need to implement a new claim adjudication process. We propose a comprehensive bundle payment including prospective cost of care for “unrelated services” and prospective cost of care for the Oncology bundle. Through MSSP, HMH is comfortable with the CMS prediction of annualized cost. To supplement this forecast HMH and Cota will provide a second cost based on predicted expense of the oncology episode. The combined cost will provide total cost of care for an entire year for each patient enrolled, and will become the bundled payment for the oncology episode. HMH will continue to submit claims to CMS for tracking of the services rendered, but these will become encounters because there will be a zero-payment associated with services classified as part of the bundle.

Due to the limited number of patients enrolled and the extended time frame, HMH would like CMS to consider a feature to mitigate extended risk. Specifically, HMH proposes a stop loss threshold at twice bundle payment per patient. If the expenses for a patient reaches the designated stop loss threshold, such patients will then exit the bundle and be considered outliers. Their statistics and treatment program will continue to be monitored, but the continued financial risk will be mitigated.

Through this program HMH and Cota will need access to all CMS claims for the patient data set to have a full view of the patient care.

Provider Feedback

HMH will use the Cota platform to provide timely electronic reporting and feedback to clinicians involved in patient care. Administrators at HMH will have access to the Cota Cortex

platform, which will provide daily updates and monitoring of the clinical, cost and quality trends of the patients in the bundle program. In addition, the CIN maintains a database of all claims and quality metrics which is delivered to the physicians monthly as a personal scorecard.

HMH is planning on routine reporting and performance sharing with the providers on a quarterly basis using reports generated from both the BI tool and Cota's Cortex platform. HMH administrators will also monitor broad performance monthly at a minimum to scan for early signs of behavior change among providers and compliance with the proscribed treatment lane the physician has selected. The CIN database provides real time quality and cost metrics for the full HMH population. Cota can create a subset feedback mechanism for the bundles to provide ongoing daily monitoring.

Impact on Spend

Cota will estimate the impact of the model on spending and quality by conducting a cohort analysis. Cota will perform a baseline analysis of Medicare FFS patients, and use this to compare against performance of patients in the bundle. These analyses will look for statistically significant differences in outcomes and quality for patients' pre- and post-bundle program.

IV. Payment Methodology (High Priority Criterion)

Proposed Model

In this model, CMS will pay HMH an agreed upon bundle price on a prospective basis as patients are diagnosed with cancer through the CNA. These bundle prices will be calculated to cover a period of 12 months of treatment.

To determine the oncology component of the bundle price, HMH and Cota will look at the average cost for a patient cohort for a baseline. We will take the set of patients that were diagnosed with cancer in the period 2013 – 2015 that had a CNA assigned to them for breast, colon, rectal and lung cancer. We will calculate the average cost for the following 12 months for these patients for the care associated with the cancer diagnosis. We will not include in this analysis expenses unrelated to cancer treatment. As stated previously, this price will be added to the calculated cost of care used by CMS in MSSP. The combined number will be the prospective payment for the bundle. We will need CMS claims data from the retrospective period to conduct such an analysis.

We are planning a sister program with a large payer partner. That program is the blueprint for the CMS PFPM and the PFPM to have the same payment methodology as program currently in development.

Care Delivery Changes & Risk Adjustment

In oncology, one of the biggest changes in care delivery will be the introduction of new therapies and corresponding healthcare utilization. We expect to define provisions in the bundle price that reflect the reality of additional reimbursement for drug costs and associated treatment services on a yearly basis for the affected bundles.

The model of the blanket bundle price will create conditions that encourage the expected changes in care delivery: namely, the standardization of approach to diagnosis and selection of treatment lane.

HMH will leverage the precision of the CNA to adjust for relative patient risk. The CNA will also guide the selection of the appropriate treatment lane. By precisely pairing the treatment lane to the diagnosis, HMH and Cota aim to reduce adverse variance, a term used to define variation in care otherwise not explained by the diagnosis or treatment. Success for oncologists participating in this PFPM is adherence to the treatment lane they select at the outset of treatment and compliance with agreed-upon quality metrics (see Appendix A). Penalties for failure to comply with quality metrics will range from withholding of incentives to loss of potential of shared savings and removal from the program.

Comparison with Existing CMMI Programs

Currently there are no prospective bundled payment programs for oncology under CMMI that we are aware of. The most similar program in oncology would be the Oncology Care Model, which is less comprehensive and more limited in scope than a global bundled payment for a 12-month period of oncology care.

Provider Financial Risk

HMH does not have plans to place physicians at financial downside risk. The physician will receive a higher compensation through the bundle if performance metrics are achieved in lieu of fee for service. There is no immediate plan to place the doctors at financial risk. The upside-only risk for the physicians is based on performance. As HMH moves to an Organized Delivery System with acceptance of increased financial risk, HMH can only succeed if providers maintain quality and efficiency. Therefore, physicians who do not meet performance and quality standards will be asked to exit the “team”, and therefore not be able to participate in any future financial models.

Appropriate Diagnosis of Conditions, Payment Units, Assignment of Claims to Episodes

In addition to current efforts underway to educate all physicians on appropriate documentation of high risk disease, HMH is planning extensive education programs for diagnosing all the attributes necessary to assign a patient at CNA. Please refer to Appendix D for the education plan.

It is most appropriate for the bundle payment unit to cover a year-long period from the initial diagnosis of cancer. HMH expects that the bulk of diagnosis, treatment and progression will occur within the first 12 months. A shorter time span may not encompass all these components, whereas a longer time span than one year becomes more administratively complex for HMH to operationalize, and less clinically predictable.

Once a patient is enrolled in a bundle, all claims billed to CMS from any HMH-related provider will be forwarded to HMH. HMH will then provide compensation for those claims. Once a patient “graduates” from the bundle, they will return to the current CMS model. We will also need to work with CMS to determine the appropriate arrangement for sharing of real-time claims data for non-HMH provision of care, particularly so that we may address leakage, with priority given to leakage associated with cancer care.

Barriers in Current Payment System

The current payment system does not encourage collaboration among providers because it rewards physicians on a transactional basis for the provision of care rather than the quality or outcome of treatment. HMH need to shift these incentives to promote the standardization and

rigorous approach to diagnosis and treatment that we seek to achieve. In addition, there are no current mechanisms for CMS to monitor duplicative or “unnecessary” service. This payment model aims to minimize those expenses.

Neither HMH nor Cota are aware of any barriers in regulation that impact coverage limitations in Medicare for this program.

V. Value over Volume

Incentives for Provision of High-Value Care

All participating physicians in this model will use Epic as their EHR. Physicians, at the point of care, will have access to the treatment lane that they have selected for the patient and the corresponding quality metrics. HMH expects physicians to reference these treatment lanes and quality metrics to make progress towards the agreed upon requirements to achieve the incentive. Real time monitoring of patients via analytics data and, more importantly, via care coordination, will nudge physician behavior towards value based decision-making.

HMH expects to have financial incentives to be aligned with achievement of the quality metrics as outlined in Appendix A.

Prior Experience with Value Programs

HMH has extensive experience in the use of incentives through its ACO. HMH has participated in MSSP since 2012 and have been successful each year on a financial as well as quality basis. Physicians have received distributions of shared savings which has displayed the benefits of patient directed care management. HMH has developed a cadre of care coordinators who have been embedded in PCP practices and interact daily with physicians and patients. We plan to utilize this same process for oncology bundles. In fact, we are currently reallocating case management staff across our continuum to increase outpatient and transition care coordination, with warm handoffs from location to location. We believe this model will then touch all patients and all providers. The only unintended consequence of the original program was that the specialists felt “left out” of the change. This has been one of the driving forces behind the rapid development of the CIN and the specialty-focused strategic direction in shifting to bundled payment arrangements.

HMH has started implementing physician incentives for value programs and has seen significant positive feedback. However, HMH is aware of the need to provide other opportunities to physicians to solidify their participation and commitment to the model. HMH has been successful in decreasing length of stay, readmissions, and unnecessary visits to the Emergency Department. Since HMH physician’s financial compensation has not caught up with value based initiatives, HMH is experiencing shifts in payment from inpatient to outpatient.

Non-Financial Performance & Incentives

Cota will be monitoring non-financial performance in the model, including patient outcomes such as delivered dose intensity of chemotherapy, progression free survival and overall survival. These outcomes will be shared with HMH administrators to share with providers. HMH is also considering publicizing examples of improved patient outcomes and care with

participating oncologists to encourage and promote the model. Recognizing outstanding physicians for improved outcomes will be a form of non-financial incentive to physicians.

HMH is developing many opportunities for physicians in the CIN. These include moving to a single EHR to improve patient throughput, development of system wide secure messaging between physicians, group purchasing, office staffing support, and other benefits. All are aimed at improving practice efficiency. Adding this to maintaining (or improving) compensation encourages and accelerates behavior change.

VI. Flexibility

Breadth and Depth of Model

This model can be adapted for the variety of clinical settings for oncology patients across the Hackensack Meridian Health system. The model will initially focus on the patients of oncologists of Hackensack Meridian Health CIN, with the model expanding to other cancer types. The model will function across a variety of patient groups so long as the patient's primary oncologist is a member of the HMH CIN. This is important because the model will not function without the requisite range of clinical settings to provide for a continuum of care for the patient.

Moving forward, Cota and HMH believe this model could be adapted across the United States, and across other areas of medicine.

HMH is also designing the bundle components to reflect the reality of fast-paced innovation in oncology. We will continue to offer patients new therapies as they are approved by the FDA and as clinically appropriate. As mentioned earlier, we will aim to revisit bundle price on a yearly basis to update for research and innovation in the bundle build. For the period in which new therapies are available but not yet reflected in the bundle price, we expect to have those therapies reviewed on a case by case basis until the bundle price can be updated to reflect inclusion of the new therapy.

Operational Impact for Providers

Operationally, HMH aims to maintain a seamless process for practitioners to reduce administrative burden at the point of care. With EPIC & Cota, the bulk of the reporting and tracking requirements are already built and electronically reported for a patient. This releases the provider of the burden to track and maintain a checklist of all the quality metrics required for the incentive.

Cota has built two platforms that will be made available to HMH: Cortex Clinical and Cortex Financial. These two modules will take the relevant data from Epic, enrich and structure it, and display the information in this powerful visualization tool for HMH administrators. This will help HMH track costs of patients enrolled in bundles, as well as the clinical and quality metrics relevant to HMH as they manage this program. See Appendix B for visuals of the Cortex platform.

HMH is enhancing its EHR with a BI tool that will make available at the point of care the relevant quality measures that physicians will need to follow through the treatment of their patients in the bundle. HMH will debut this tool for the payer program, and use that experience to iterate and improve so that it can be leveraged for the CIN as well.

VII. Ability to be Evaluated

Metrics for Evaluating the Model

HMH and Cota will be evaluating clinical quality metrics and financial metrics (see Appendix A). The model's objective is to improve outcomes, reduce costs and decrease adverse variance in care. Historically HMH has had high variability in treatment and we seek to ensure, through CNA-Guided Care™, that any variance in treatment can be explained by the CNA of the patient.

Cota will monitor whether the program will improve outcomes, and reduce unnecessary utilization and associated costs. HMH and Cota will also be evaluating whether care providers will be delivering the appropriate care. This analysis will drive education and the closing of gaps in care. HMH is planning to operationalize a feedback program in the CIN.

HMH has experience with this concept across its providers. HMH has two large Medicare Shared Savings programs, and data from the program is used to drive changes in behavior. For example, in January 2017 HMH communicated to PCPs lists of patients on branded medications with generic alternatives. HMH currently has initiatives to conduct outreach to diabetic patients with uncontrolled blood sugars to re-connect them with PCPs and control or impede progression of disease. HMH is monitoring the impact of that outreach. HMH has experience managing populations and improving quality among Medicare patients.

Besides quality metrics, at the provider and physician level Cota and HMH will monitor patient-reported outcomes, such as patient satisfaction with the care provider team. This has traditionally been measured this through surveys.

At the population level HMH will set goals for quality improvement (e.g. rates of testing for appropriate genomic testing and time to CNA assignment), reduction in costs (e.g. reduction of unnecessary diagnostics, reduction of avoidable complications/hospitalizations), and better outcomes (e.g. comparison of outcomes for patients pre-and post- PFPM launch). Each of these specifics can be evaluated and compared to unmanaged historical data.

VIII. Integration and Care Coordination

Clinicians in the Model

As mentioned in earlier sections, at the core all physicians in the Hackensack Meridian Health CIN would be included in the function of the model. The implementation will require education of all related specialties, detail of the metrics and protocols, and explanation of the monetization of the bundle. Non-physicians, such as ARNPs, RNs, etc would also undergo training and education on this program. A major determinant of success is the day to day care coordination provided by this staff. See Appendix D for the education plan HMH will implement for this program.

Care Coordination through the Model

Practitioners in the model, regardless of specialty, will have access to the patient's plan of care through Epic. The integration of the various EHRs across Hackensack Meridian Health enables the sharing of key clinical and treatment information across the spectrum of professionals that touch the patient. As previously stated, global care coordination is in the early implementation phase across the network continuum. This program will assist those previously uneducated in the process to observe and participate. In addition, HMH is rolling out a care management module in the EPIC EHR, called Healthy Planet. Embedded in this module will be a patient care plan based upon medical history, family history, genetics, environmental factors, and diagnostics. The care plan will constantly be modified based on new events, and correction of previous disorders. It is expected that this care plan will travel with the patient from birth to death, acting as a living health care map.

Other workforce requirements

The key change in the workforce will be the level of analytic and IT support that is required to oversee and manage such a program. Traditional models for payment, such as FFS, do not focus on quality and outcomes, and therefore have not required the type of workforce that is vital when those elements become intrinsic to the success of the alternative payment model. The investment in IT requires dedicated resources to build, integrate and simplify digital communication channels through Epic. The investment in analytics aims to standardize and integrate feedback processes on performance on as real-time of a basis as possible. This also requires seamless physician communication to optimize care. There will also be a reorganization of staff from the inpatient to the outpatient divisions as HMH provides more services in the outpatient environment.

IX. Patient Choice

Accommodating individual patient choice & disparities

The bundle model includes all treatment options available. It is possible that a patient may choose not to pursue chemotherapy treatment. This is contemplated in the architecture of the lanes concept. In this model, a patient will be assigned to a bundle, and the treatment lane will differ based on the clinical decision of the physician and by choice of the patient. There may be patients that will refuse a lane, and will be moved to another lane. A lane may be chemotherapy, or another lane may simply be observation. In either case a lane will then generate downstream implications in how care is managed. Each lane will provide for routine and comorbidity care management (see Appendix C for what is included in routine and comorbidity management).

Moreover, the bundle, the CNA, and the lanes are all blind to socioeconomic factors. It will be open to all patients, regardless of background. There may be a patient financial liability difference between treatments and HMH and Cota will seek to neutralize those through discussions with CMS. We do not expect the model to adversely impact disparities among Medicare beneficiaries.

Because all cancer-related medication is included – oral chemotherapy, or oral anti-emetic, or any other drug the patient needs to take from the pharmacy – we will have improved adherence and persistence, which is typically associated with improved outcomes.

Patients will be educated in regards to their expectation of what is included in their treatment lane. Without corresponding patient education for their treatment, HMH does not expect to have the outcomes we are aiming to achieve.

Finally, Cota will be able to run analyses comparing groups that refused or selected certain treatments to understand whether there are any factors at play driving that decision that may not have been previously considered or visible. Cota will be able to audit whether there are any biases in care due to socioeconomic factors that HMH may not have been attune to.

Diversity of participation in APMs

This model would expand the demographic, clinical and geographic diversity of participation in alternative payment models because it would give access to patients that are not already in the Oncology Care Model or an ACO. This model will be more inclusive and comprehensive. In addition, if successful, this model can be replicated to other geographies, as well as other medical conditions. Finally, HMH will be expanding the participation of patients without discrimination with respect to demographic or social determinant.

X. Patient Safety

Avoidance of adverse patient consequences

This model is not intended to withhold care to achieve savings. Through the selection of the treatment lane, everything for the patient is prescribed, from the points in time the patient sees the physician, to the labs that need to be ordered, to monitoring of patients on chemotherapy. The treatment lane is clinically based and adherence to it will be tracked by Cota. Cota will be tracking that visits occur, quality measures are met, and the related outcomes. Because of the plethora of oncology drug regimens, by leveraging Cota's repository of real world evidence HMH will be aiming to drive patients to the treatments with the better outcomes at the best cost, which by definition improves patient safety.

At HMH patient safety is a priority. For example, HMH has conducted rigorous analysis of staffing and work flow to model how frequently physicians are seeing the patient prior to the start of chemotherapy at the hospital. HMH has learned that patients that have seen their physician immediately prior to starting chemotherapy have fewer incidents of toxicity. HMH believes this occurs because physicians can better gauge patient readiness to tolerate chemotherapy, and manage the dose or other interventions to that effect. This is an example of a prudent medical service at HMH that has not been billed to CMS as such. Under a bundle program HMH can promote and systematize activities such as this without concern of the individual financial implications of each unit of service.

Cota and HMH agree that that the two organizations will have a set of checks and balances to ensure that the provision of necessary care is not impacted by this alternate payment model, nor that care is withheld. HMH will not be the only entity auditing its own data. Any undesirable anomalies in quality or outcomes found by Cota will be highlighted and reported back to HMH for correction.

Accountability for intended benefits

The plan is for Cota to monitor on a weekly basis to embed suggestions for any potential adjustment that may be necessary. This information will be shared through Cortex (see Appendix B). Because of Cota's experience with the Oncology Care Model, Cota and Epic already have a digital interface for a bidirectional information feed. The dashboard reports out on a population, provider, and patient level. Cota reports all the information through Cortex. The feedback mechanism will be at the physician level for discussions on individual patient quality and outcomes. HMH will also have feedback at the departmental level to inform physician leaders on their group's performance in the provision of care.

XI. Health Information Technology

Protection of PHI

All physicians that are trained must comply with HMH's HIPPA and compliance policies, and HMH will only include physicians that are in good standing with the hospital, only physicians in the Clinically Integrated Network (CIN), aka Hackensack Meridian Health Partners. Additionally, HMH has compliance officers within HMH that routinely audit for providers that are excluded from Medicare services.

Promotion of transparency

To promote transparency, HMH has developed a database which will provide monthly reports regarding cost of care, as well as quality metrics based on specialty. By leveraging Cota and its analytic capabilities, physicians will be educated on the benefits of optimizing and standardizing care. Achieving goals of the oncology PFPM will encourage physicians to participate in bundles for other conditions.

Interoperability of EHRs

The plan is to move all HMH to EPIC over the next several months. All Meridian sites by fall of 2017 will be on Epic. Employed primary care centers in south are on GE Centricity, with a timetable to transition to Epic the fall of 2017. Currently HMH is using the Health Information Exchange to gather clinical data from a few disparate EHR's. HMH currently enters all claims data into a single database, as stated previously. This provides us with a modicum of quality information. At that time, standardization of all healthcare information will be achieved.

Innovations in information technology

As stated, HMH has implemented an innovative telemedicine program to improve the patient experience. HMH's secure physician communication application will also eliminate delays in care. Additionally, HMH has also implemented a digital communication platform to facilitate patient outreach, which will be leveraged in this PFPM.

Provider flexibility through information technology

HMH is building a Bundle Assembly Tool (BAT) to electronically display options for physicians to select lanes once they have assigned a CNA. This will then be linked into Epic to generate the calendar (See Appendix E). This is the critical decision support element at the point of care that will establish the care plan for the remainder of the patient's cancer care episode. It will be visible to any clinician that accesses that patient's record. The BAT assists in defining all the clinical pieces of the patient's care and the frequency of physician visits, surgeries, research nurse screenings, physical therapy, etc. – all information captured will allow us to track bundle costs.

Supplemental Information

Appendix A

Quality Measures

Breast Measures:

Surgery:

- Needle biopsy is completed within 10 days of screening mammogram
- No tumor present on inked margins
- 1-2 lymph nodes assessed if SLN is negative
- 10 lymph nodes assessed if SLN is positive
- Breast surgery case required two or more re excisions
- DCIS patients have 2mm margins present
- Reconstruction done post mastectomy
- pathology biopsy review (ER/PR/Her 2 report) is completed within 48 hours
- Surgery is completed within 30 days of needle biopsy
- postop nausea/vomiting is documented
- postop pain score is documented
- postop plan of care for pain is documented
- Surgical breast cancer patient admitted after surgery
- Universal Protocol (time out) is completed prior to surgery

Oncology:

- Breast cancer patient admitted due to chemotherapy complications
- Breast cancer patient had an ER visit due to chemotherapy complications
- Tamoxifen or AI is recommended for Stage I – III ER/PR positive breast cancer within 1 year of diagnosis
- Tamoxifen or AI is prescribed for Stage I – III ER/PR positive breast cancer within 1 year of diagnosis
- Chemotherapy is recommended within 4 months of diagnosis for stage I – III ER/PR negative breast cancer for women under 70
- Her-2/neu testing is completed
- Breast cancer patients with bone metastases receive treatment with IV bisphosphonates or denosumab
- Renal function assessed prior to the first administration of bisphosphonates or denosumab

- Combination chemotherapy administered or recommended within 4 months of diagnosis by women under 70 with AJCC stage I (T1c) to III ER/PR negative breast cancer
- Trastuzumab recommended for patients with AJCC stage I (T1c) to III Her-2/neu positive breast cancer
- Trastuzumab administered when Her-2/neu is positive
- Trastuzumab not administered when Her-2/neu is negative or undocumented
- New breast cancer patients are seen by a nurse navigator in medical oncology
- Press Ganey score of 5 for ease of reaching staff on the phone with ease in Radiation Oncology
- Patients with a BMI of 30 or above saw a dietitian within 1 month of referral

Genetics:

- Patient with invasive breast cancer are referred for genetic testing
- Patient with invasive breast cancer with positive family history of breast cancer are referred for genetic testing
- Genetic counseling referral for patients with invasive breast cancer with increased hereditary risk of breast cancer
- Genetic testing for patients with invasive breast cancer with increased hereditary risk of breast cancer
- Patient informed consent for genetic testing documented
- Genetic counseling completed to discuss results following genetic testing
- Complete family history documented for patients with invasive breast cancer
- Presence cancer in first-degree blood relatives documented
- Presence of cancer in second-degree blood relatives documented
- Age at diagnosis documented for each blood relative noted with cancer

Colorectal Measures:

Surgery:

- Metastatic work-up CT scan with contrast of Chest, Abdomen, and Pelvis completed within 30 days of surgical exam
- MRI preoperatively for rectal cancer
- Extent of Local Invasion Ultrasound OR MRI performed within 30 days of surgical exam
Synoptic MRI Report determination of Circumferential Radial Margin
- CEA level completed
- Colonoscopy to examine entire colon completed within 3-4 months post-op
- Pre-operative antibiotics administered within 60 minutes of incision
- Antibiotics discontinued within 24 hours postoperatively
- Surgery is completed within 21 days of consult (colon only)

- postop nausea/vomiting is documented
- postop pain score is documented
- postop plan of care for pain is documented
- Surgical patient admitted after surgery
- Universal Protocol (time out) is completed prior to surgery

Oncology:

- Colorectal cancer patient admitted due to chemotherapy complications
- Colorectal cancer patient had an ER visit due to chemotherapy complications
- CEA done within 4 months of curative resection for colorectal cancer
- Adjuvant chemotherapy administered or recommended within 4 months of diagnosis for patients with AJCC stage III colon cancer
- Number of lymph nodes documented for resected colon cancer
- 12 or more lymph nodes examined for resected colon cancer
- Adjuvant chemotherapy administered or recommended within 9 months of diagnosis for patients with AJCC stage II or III rectal cancer
- Colonoscopy before or within 12 months of curative colorectal resection or completion of primary adjuvant chemotherapy
- KRAS testing for patients with metastatic colorectal cancer who received anti-EGFR MoAb therapy
- Anti-EGFR MoAb therapy received by patients with KRAS wild type
- Adjuvant chemotherapy is recommended within 4 months of surgery to patients under the age of 80 with AJCC III colon cancer
- Adjuvant chemotherapy is administered within 4 months of diagnosis for patients under the age of 80 with AJCC stage III colon cancer measured by Tumor Registry and reported quarterly
- Patients/caregiver attended the chemotherapy education class
- Disease specific patient education documented

Lung Measures:

Surgery:

- At least 10 regional lymph nodes are removed and pathologically examined for AJCC stage IA, IB, IIA, and IIB resected NSCLC
- Surgery is not the first course of treatment for cN2, MO lung cases
- Length of stay after lobectomy is less than 3 days
- Surgery is completed within 14 days of consult
- postop nausea/vomiting is documented
- postop pain score is documented

- postop plan of care for pain is documented
- Surgical patient admitted after surgery
- Universal Protocol (time out) is completed prior to surgery

Oncology:

- Lung cancer patient admitted due to chemotherapy complications
- Lung cancer patient had an ER visit due to chemotherapy complications
- Adjuvant chemotherapy administered or recommended for patients with AJCC stage II or IIIA NSCLC
- Adjuvant cisplatin-based chemotherapy received within 60 days after curative resection by patients with AJCC stage II or IIIA NSCLC
- Adjuvant chemotherapy not recommended for patients with AJCC stage IA NSCLC
- Adjuvant radiation therapy not recommended for patients with AJCC stage IB or II NSCLC
- Performance status documented for patients with initial AJCC stage IV or distant metastatic NSCLC
- Platinum doublet first-line chemotherapy or EGFR-TKI (or other targeted therapy anti PD1 with documented DNA mutation PD1 +) received by patients with initial AJCC stage IV or distant metastatic NSCLC with performance status of 0-1 without prior history of chemotherapy
- Bevacizumab not administered for patients with initial AJCC stage IV or distant metastatic NSCLC with squamous histology
- Positive mutation for patients with stage IV NSCLC who received first-line EGFR tyrosine kinase inhibitor or other targeted therapy
- First-line EGFR tyrosine kinase inhibitor or other targeted therapy not administered for patients with stage IV NSCLC in the absence of positive mutation
- Dyspnea assessment documented
- Dyspnea management is documented

Measures for all disease groups:

Oncology:

- Pain score documented
- When pain score is >0, plan of care for pain is documented
- Constipation is documented on all patients taking narcotics
- Bowel regimen is documented for all patients with constipation
- Current medication documented at all visits
- Diagnosis is documented
- Prognosis is documented

- Treatment goals are documented
- Plan for IV chemotherapy treatment is documented
- Plan for oral chemotherapy treatment is documented
- Oral chemotherapy education is documented
- Oral chemotherapy adherence is documented
- Treatment intent is documented
- Expected response to treatment is documented
- Discussion of treatment benefits and harms for IV chemotherapy is documented
- Discussion of treatment benefits and harms for oral chemotherapy is documented
- Discussion of fertility preservation options is documented
- Informed consent is signed for IV chemotherapy
- Informed consent is signed for oral chemotherapy
- Cancer care team is documented
- Advanced care plan is documented prior to the third office visit
- Estimated total and out-of-pocket costs are documented
- Depression screening is documented every 6 months
- When clinical depression screening is >9, plan of care for depression is documented
- Distress screening is documented prior to the second office visit
- Living with Cancer is completed
- Chemotherapy treatment summary (survivorship plan) is completed within 3 months after completion of chemotherapy
- Chemotherapy treatment summary (survivorship plan) is given to patient within 3 months after completion of chemotherapy
- Influenza immunizations are documented
- Tobacco use is documented
- Smoking cessation education is documented
- Referring physician note is obtained
- Pressure sore present
- Pathology report completed
- Staging documented within one month of first office visit
- Serotonin antagonist prescribed with moderate/high emetic risk chemotherapy
- Corticosteroids and serotonin antagonist prescribed with moderate/high emetic risk chemotherapy
- Aprepitant prescribed with high emetic risk chemotherapy
- Baseline iron stores documented within 90 days prior to administration of ESAs Monthly EPIC report
- Hemoglobin < 10 g/dL documented within 2 weeks prior to administration of ESAs
- Hospice/palliative care referral documented
- Hospice referral greater than 3 days prior to death

- Chemotherapy administered within 14 days of death

Infection monitoring:

- Central line-associated bloodstream infection not present
- Catheter-associated urinary tract infection not present
- MRSA bloodstream infection not present
- C.diff infection not present
- Blood cultures not positive
- Wound infection is not present

COTA Analytics:

- Overall Survival measured by COTA
- Progression free survival measured by COTA
- Degree of Tumor response (complete or partial) measured by COTA
- Delivered dose intensity every chemotherapy treatment measured by COTA
- Incidence and severity of toxicities every visit measured by COTA

Risk management & PI:

- Falls quarterly measured by Risk Management with monthly reporting
- Falls with Injury quarterly measured by Risk Management with monthly reporting
- Healthcare workers given influenza vaccination annual BI report
- Mortality Rate for all Cohorts monthly BI report
- Rate of readmission after discharge from hospital (hospital-wide) annual BI report

Finance monitoring:

- Monthly/quarterly review of all HMM bundle costs
- Monthly/quarterly cost analysis for each bundle patient
- Monthly/quarterly review of lane assignment for each bundle patients
- Finance prepared monthly/quarterly MD report card
- Monthly/quarterly review of payer excluded services

Reliability measures being monitored:

- Radiation - Time out completed before every procedure daily
- Radiation - Simple sim completed
- Radiation - 1st day monitor completed
- Radiation – Treatment machine/CT/Sim QA completed
- Radiation – Physics QA completed

- Radiation – Treatment volume rounds completed weekly. (Peer review of treatment plan, treatment volume and organs at risk)
- Radiation – Weekly chart checks by RTT and Physics completed
- Radiation – Unintentional deviations reporting and recording completed
- Radiation – Morbidity and Mortality rounds completed quarterly
- Surgery - Time out completed before every procedure
- Pharmacy chemo checks completed
- Nursing chemo checks completed
- Genetic counseling referrals completed

Patient experience monitoring; Patient Satisfaction

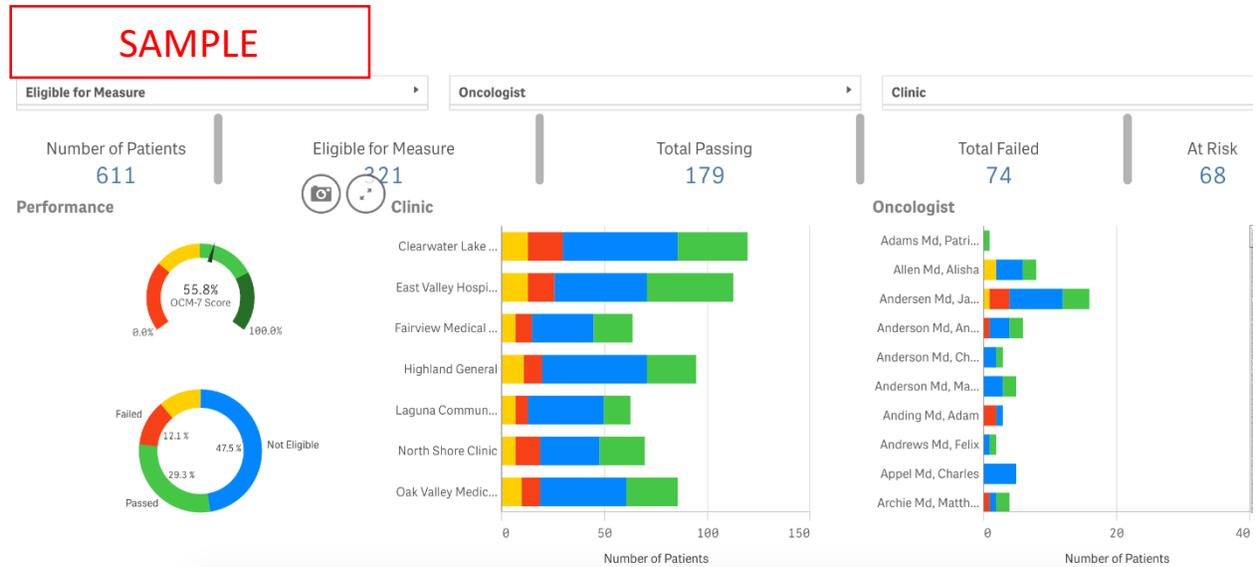
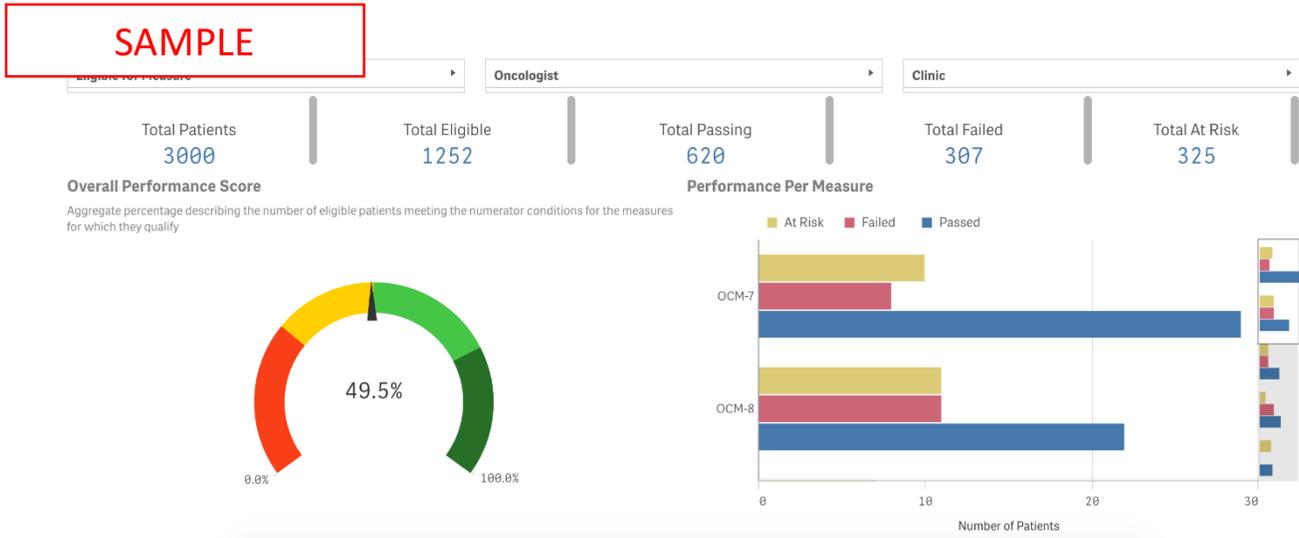
- Cleanliness of Hospital Environment quarterly Press Ganey report
- Nurse Communication quarterly Press Ganey report
- Doctor Communication quarterly Press Ganey report
- Responsiveness of Hospital Staff quarterly Press Ganey report
- Pain Management quarterly Press Ganey report
- Communication About Medicines quarterly Press Ganey report
- Discharge/Home Care Information quarterly Press Ganey report
- HCAHPS 3 Item Care Transition Measure quarterly Press Ganey report
- Overall Rating Hospital quarterly Press Ganey report
- Quietness of Hospital Environment quarterly Press Ganey report
- Willingness to Recommend Hospital quarterly Press Ganey report

Patient-Reported Outcomes

- Press Ganey
- College of Surgeons
- OCM
- GPRO
- Patient-reported outcomes – all national guidelines concerning pain management and guidelines

Appendix B

Visual of Cota Cortex for Quality Tracking



Appendix C

Routine Care Management

- Medical:
 - E&M visits
 - Skin exam
 - GYN exam
 - Smoking Cessation
 - BMI/Weight loss
 - Integrative Medicine:
 - Integrative Oncology Consults & follow up x 2
 - Acupuncture x 12
 - Health psychologist x 4
 - Health coach x 6
 - Nutritionist x 4
 - Pre-hospital program visits x 3
 - Movement therapies x 15
 - Biofeedback x 6
- Diagnostics Labs:
 - CBC
 - Chemistry
- Diagnostics Imaging:
 - Mammogram
- Diagnostics Procedures:
 - Colonoscopy
 - EKG
 - Bone Density

Comorbidity Care Management

- Medical:
 - E&M visits
- Diagnostics Labs:
 - Hemoglobin A1C
 - PFTs
 - Glucose finger sticks
 - 24 hour urine
 - Creatinine clearance
 - CBC

- Chemistry
- Blood cultures
- Catheter C&S
- Wound C&S
- Sputum C&S
- Diagnostic Imaging:
 - Renal U/S
 - CXR
- Diagnostic Procedures:
 - EKG
 - Stress Test – routine
 - Stress test – nuclear
 - EEG

Appendix D

Education Plan

Patient Education:

Bundle education for patients will be done along with clinical education at the following time points with re-education as needed. Hard copy educational material in lay terms will be developed to explain the bundle process:

- Initial Diagnosis, Staging and Treatment Plan: Bundle education for patients will be done along with clinical education at the following time points with re-education as needed.
- Pre-Operative Treatment Planning: Predictive Education, Integrative Nutrition and Fitness Consult/Education, Concierge Call Mastectomy Resources, Reminder of Psycho/Social Resources (Intro Look Good Feel Better), Measures: Quality of Life, Time to Surgical Consult (Registry), Press Ganey, Empathy (Watson)
- Pre-Medical Oncology Treatment Planning (Chemotherapy/Radiation Therapy/Immuno-Oncology/Research Trials): Predictive Education, Integrative Nutrition and Fitness Consult/Education, Concierge Call (Hair Loss Resources), Reminder of Psycho/Social Resources, Measures: Quality of Life, Time to Surgical Consult (Registry), Press Ganey, Empathy (Watson)
- After-Care/Life-Long Health & Well-Being/Survivorship: Predictive Education, Check-in with Your Navigator, Concierge Call for Wellness, Fitness Resource Overview, Integrative Health and Medicine Nutrition and Fitness Recommendations, Offer Psycho/Social Resources, Survivorship Programs and Support Groups, Measures: Quality of Life

Physician/Staff Education:

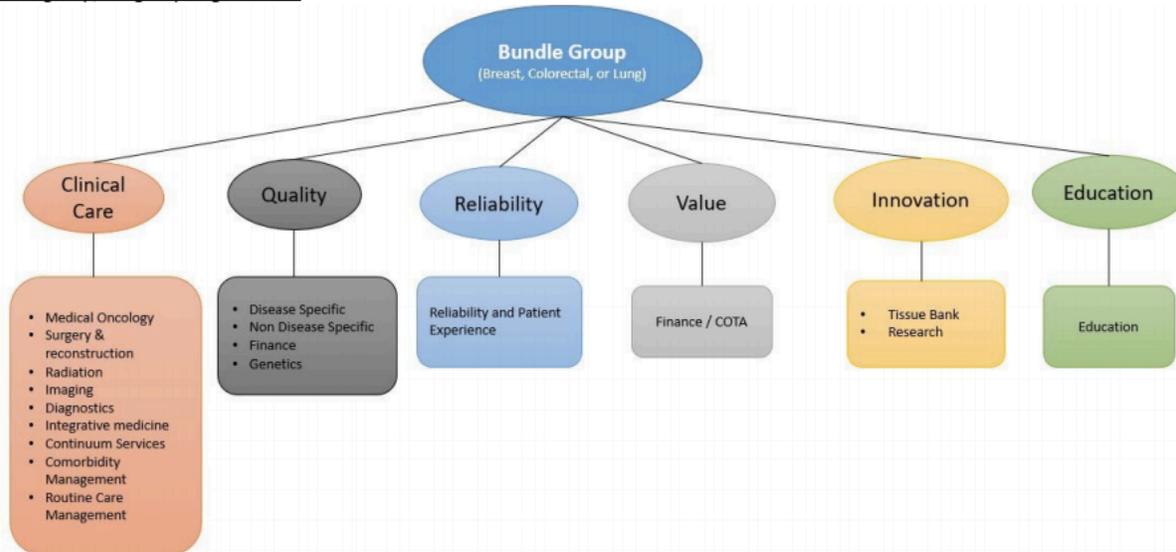
Education will include the process used to develop the bundle and the bundle product. Education will be done through a team based approach using case studies. E-learning for nursing staff to be developed.

- Bundle overview
- Bundle clinical treatments
- Bundle quality measures
- Bundle reliability measures
- Bundle innovation

Appendix E –Bundle Assembly Tool Organization and Sample Output Calendar

Navigating the BAT

Workgroup/Subgroup Organization



Timeline for Lane / Regimen

Bundlegroup Breast
 Bundle 2) (Neo) Adjuvant Breast Cancer Her 2 Neu Positive
 Lane Lane-1 Premenopausal Neoadjuvant Hormone only

Week	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
(1) Diagnostic: Breast Screening			(1) Diagnostic: Labs - Breast	(1) Diagnostic: Genetics - Breast	(2) Comorbidity Management (Breast Diagnostic Procedures)		(1) Surgery Consult	(1) Surgical workup	(1) Surgery - Breast: 1	(1) Physical Therapy Breast	(1) Surgery Follow-up		(4) Comorbidity Management (Breast Diagnostic Procedures)		(1) Surge Follow-up
(1) Education Physician/Staff		(1) Medical Oncology Professional	(1) Medical Oncology Breast workup	(2) Comorbidity Management (Diagnostics Labs)			(1) Medical Oncology Professional		(1) Surgery - Breast: 2	(1) Lymphedema Clinic Breast	(2) Medical Oncology Professional		(4) Comorbidity Management (Diagnostics Labs)		(1) Diagnostic Labs - Breast
(1) Education (patient - initial)		(1) Research	(1) Quality: Genetics	(2) Comorbidity Management (Diagnostic Imaging)			(2) Medical Oncology Technical - Bundle 2, Lane 1, Regimen 3		(1) Surgery - Breast: 3		(3) Medical Oncology Technical - Bundle 2, Lane 1, Regimen 3		(4) Comorbidity Management (Diagnostic Imaging)		(3) Medical Oncology Professor