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Bundled Payments for Care Improvement

Preparing for the Medical Diagnosis-Related Groups

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BACKGROUND: The Centers for Medicare and Medicaid Services Innovation Center introduced the Bundled Payments for Care Improvement (BPCI) initiative in 2011 as 1 strategy to encourage healthcare organizations and clinicians to improve healthcare delivery for patients, both when they are in the hospital and after they are discharged. Mercy Health Saint Mary's, a large urban academic medical center, engaged in BPCI primarily with a group of medical diagnosis-related groups (DRGs).
OBJECTIVES: In this article, we describe our experience creating a system of response for the diverse people and diagnoses that fall into the medical DRG bundles and specifically identify organizational factors for enabling successful implementation of bundled payments.
RESULTS: Our experience suggests that interprofessional collaboration enabled program success.
CONCLUSIONS: Although still in its early phases, observations from our program's strategies and tactics may provide potential insights for organizations considering engagement in the BPCI initiative.

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Rationale for Bundled Payments

The Patient Protection and Affordable Care Act, signed into law in 2010, expanded the Centers for Medicare and Medicaid Services (CMS) capability to create incentives for reducing costs while improving quality of healthcare by authorizing alternative payment models.[1] These initiatives reward providers based on the value and quality of care they deliver to patients while also penalizing them if costs exceed a set amount. In 2011, the CMS Innovation Center introduced the Bundled Payments for Care Improvement (BPCI) initiative as 1 strategy to encourage healthcare organizations and clinicians to improve healthcare delivery for patients, both when they are in the hospital and after they are discharged.

The BPCI initiative aims to transition the traditional model of healthcare reimbursement from fee-for-service to value-based care. It is based on the premise that separately reimbursing for all healthcare services provided during a single episode of care may spur a financial incentive to increase the volume of each service regardless of cost or effect on outcomes. Bundling services a patient receives across a single episode of care into a single predetermined payment reduces this incentive and rewards participating organizations, hospitals, postacute care providers, physicians, and other practitioners for the provision of efficient, high-quality, coordinated care across the entire course of treatment.[2] Through contracting participants to assume financial risk/liability for their patients' care, BPCI aims to encourage healthcare

organizations to take accountability for the full spectrum of delivery—both acute and postacute—as a single episode of care, defined as all related services up to 90 days after hospital discharge to treat a clinical condition or procedure.

How Does BPCI Work?

Bundled Payments for Care Improvement offers participants flexibility to engage in 1 of 4 models of bundled payments tied to a single episode of care for up to 48 different medical and surgical conditions. Testing a variety of models, which vary by the types of providers involved, prospective versus retrospective payment, and the length of time of the bundle after the index hospitalization (30, 60, or 90 days postdischarge), aims to develop a proof of concept that broadly defined bundles are an effective payment strategy to improve quality and reduce costs of care.[2]

Most BPCI participating hospitals engage in model 2, in which CMS calculates a bundled payment amount (the target price) for each selected episode by applying a national trend factor to a hospital's historical Medicare claims data.[3] If the total expenditures are less than the bundled payment amount, CMS awards those savings to the hospital. If the expenditures are greater than the bundled payment amount, then the hospital pays a recoupment amount to CMS.

Preliminary Evidence

The 1st round of participants entered risk agreements on October 1, 2013, and January 1, 2014. In April 2014, CMS selected a 2nd round of participants who accepted financial risk in 2015.[4] As of October 2015, there were 1551 healthcare organizations participating in BPCI, including hospitals, skilled nursing and inpatient rehabilitation facilities, home health agencies, and physician group practices.[2] Hospitals participating in BPCI, as compared with non-BPCI hospitals, were primarily large, urban, nonprofit, teaching institutions.[4,5] Although the empirical evidence supporting bundled payments is still emerging, demonstration projects have shown promising results in reducing costs and improving coordination of care.[6-9] Preliminary evidence from the earliest participants in the model suggests that more costly institutional postacute care was substituted with less costly home healthcare and that hospital length of stay (LOS) and 30-day readmission rates decreased.[10]

A Collaborative BPCI

A significant amount of the existing literature has focused on bundled payments for surgical episodes of care. These diagnosis-related groups (DRGs) lend themselves to pathways across systems with distinct and identifiable planned steps in the process of care. In contrast, we engaged in BPCI starting in April 2015 primarily with a group of medical DRGs chosen based on the potential to improve cost and quality of care in our system. In this article, we describe our experience creating a system of response for the diverse people and diagnoses that fall into the medical DRG bundles.

About Mercy Health

Mercy Health Saint Mary's Hospital is a midwestern urban, nonprofit, teaching hospital with greater than 22 000 inpatient discharges and 80 000 ED visits per year. We entered risk agreements through model 2 for 5 bundles including 20 medical DRGs on April 1, 2015, and added 11 additional bundles composed of 38 additional DRGs on October 1, 2015. Our hospital selected clinical conditions on the basis of patient volume, opportunity to impact savings and quality, and organizational and clinical team readiness. The DRGs chosen by the organization were primarily medical or unplanned surgical DRGs including acute myocardial infarction, cardiac arrhythmia, cellulitis, medical noninfectious orthopedic, medical peripheral vascular, esophagitis, gastrointestinal (GI) hemorrhage, other respiratory and red blood cell disorders, syncope and collapse, nutritional and metabolic disorders, and renal failure without dialysis.

Discussion

Setting the Stage: Preparing for BPCI Success, Infrastructure for Leadership, and Ongoing Management

Bundled payment offers a unique opportunity for nursing and the interprofessional team to recreate the system of care to improve patient outcomes. The chief nursing officer (CNO) has an important role in building culture and a sense of urgency to improve delivery through collaboration and integration of evidence-based best practice. In our organization, the CNO convened an interprofessional team of leaders from nursing, pharmacy, coding, finance, care management, radiology, physical therapy, palliative care, hospitalists, and cross-continuum providers to set the stage for the initiative and provide baseline education to understand the implications for practice change. Monthly steering team meetings are held to review metrics, outcomes, and process improvements and keep the initiative top-of-mind for multiple providers. A consistent message of redesigning the system for all patients, not only those in the BPCI initiative, facilitates engagement. The CNO identified the Director of Complex Care, a certified clinical nurse leader with demonstrated success in managing complex patients and engaging interdisciplinary teams in changing systems and processes, to support ongoing cross-continuum

support with improved long-term outcomes as the lead for this initiative.

The Foundation

The 1st step in BPCI readiness is having an active and effective process for identifying patients eligible for the program. A working DRG within 24 hours of a patient's admission is necessary for early patient engagement. This is critical with the medical DRGs because unplanned admissions do not allow for preplanning with a surgeon's office before admission. The information system needs to be built to communicate the working DRG to interested parties who can impact the plan of care. We created a daily email from the clinical documentation improvement (CDI) staff that included new patients in the BPCI program with the bundle DRG and geometric mean LOS. This was distributed to the Care Management team, BPCI nurse navigators, and key players who had a role in patient intervention.

The medical DRGs require a robust process to identify patients postdischarge who fall out of the bundle because of final coding and patients who add into the bundle after discharge because of final coding. Medical DRGs can change with progression of illness during admission, as well as postdischarge, because of interpretation of severity of illness gathered from final physician documentation. We found in our population that 16% were ineligible after initial review, 30% dropped out 2 weeks later after the final coding, and 10% added into the BPCI program after discharge. When planning for staffing needs, it is important to consider this aspect because the team following the population actually ends up intervening with a significant number of patients who drop out of the program in final coding.

Creating a Care Transformation Team

Process improvement and interprofessional collaboration are important for success in BPCI with the medical DRGs. The BPCI lead immediately convened a team that met weekly to look at process improvements and system design to improve outcomes. The team included CDI staff, case management, utilization review, nursing, transition coordinators, radiology, pharmacy, respiratory therapy, rehabilitation, home care leadership, BPCI nurse navigators, primary care case management, hospitalists, physicians (primary care providers and specialists), and others as needed to address the continuum of care.

The team met weekly to draft an interprofessional process map of what each discipline could contribute to patient stabilization. Rather than focusing on changing the system only for specific diagnoses, we chose to look at this as an opportunity to improve processes for all patients. Some changes were made as pilots with the BPCI population with the intent to roll them out more broadly.

As the information from population intervention grew, findings by service line were translated into process improvements in mini care transformation teams by service line. A complicating factor with medical DRGs is that the patients were not concentrated in 1 unit or service line, even with the same DRG. This necessitated a more complex cross-system view of the population as an approach to care transformation.

Core Values of the Approach

Redesign of care delivery to improve outcomes involves taking a new view of the patient experience. To achieve success in risk-based payment, we found key principles that guided development (Figure 1). The proliferation of care management initiatives has created many new case management and navigator roles. Rather than replacing existing relationships with a new navigator serving the patient for only 90 days, we found that it was important to partner with the cross-continuum team already involved in patient care rather than duplicating efforts. Root cause analysis of the medical, psychiatric, social, and system issues contributing to patient instability is key to improving outcomes and gaps in the plan of care.[11] Translating the analysis and opportunities into the electronic medical record (EMR) in standardized root cause notes alerts all disciplines of opportunities to improve care delivery.[11] Engaging an interprofessional team in design, program oversight, and daily rounds offers many opportunities to expand the circle of expertise contributing to patient stabilization and efficient system redesign. Reporting population data and outcomes and analyzing patterns in readmissions on a weekly basis facilitate rapid cycle attendance to process

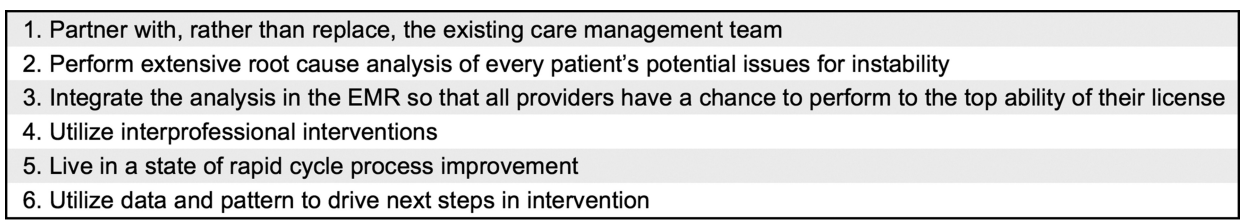

Figure 1. Core values of the approach.

improvements that can change the system of care delivery for all patients.

Roles in the Interprofessional Team

BPCI Navigators

A common practice in BPCI programs is to implement a nurse navigator role to manage the patient for the 90-day episode of care. Serving as a key point person for inpatient care coordination, transitions of care, and linkages postdischarge, the role can be a helpful asset in BPCI success. We chose a partner model to maximize efficiency and resources. The navigators were trained to perform extensive cross-continuum root cause analysis of potential barriers to stabilization and then integrate with the cross-continuum team to link established care management relationships (job description of BPCI navigator uploaded as Supplemental Digital Content 1, http://links.lww.com/JONA/A529). The entire care team is thus engaged with information to drive the care plan cross continuum. Clinical notes in a standard root cause template are entered in the inpatient EMR and in the primary care EMR to translate helpful information cross continuum.[11] Navigators and the BPCI program leadership team met weekly to analyze patient data and perform root cause analysis of readmissions to identify potential opportunities for process improvement. Information from patient interventions is rapidly translated into process improvements that would affect all patients, not only those in the BPCI program.

CDI Specialists

Accurate identification of patients eligible for BPCI is critical for success in the program. The CDI staff are active members of the care transformation team who redesigned their processes to identify eligible patients by 11 AM each day. Review of patients who are ineligible in the final coding and who add in after the final coding is performed to identify process improvement opportunities. Many of the drivers of opportunity for improvement come from timing related to DRG determination and physician education about documentation standards. The medical DRGs chosen by our site often represent a progressing illness, which offers rich opportunity for additional clarification and teaching to hone comprehensive physician documentation and CDI staff clinical interpretation for the most accurate coding. The relationship between CDI staff and medical staff is a critical success factor for this element, and ongoing concurrent relationships and personal engagement enhance clinical documentation.

Pharmacy Staff

Pharmacy personnel rapidly engaged to contribute to improvement in delivery for BPCI. Key issues identified by the transformation team included medication reconciliation, best practice medication management, provision of medications at discharge, and the opportunity for a pharmacist-to-pharmacist handoff to the next site of care at discharge. The pharmacy team receives a daily email of all potentially eligible BPCI patients. Medication reconciliation is performed for all BPCI patients by the medication historian role (job description of medication historian uploaded as Supplemental Digital Content 2, http://links.lww.com/JONA/A530). Pharmacists perform medication review and integrate a note in the EMR with recommendations for best practice pharmaceutical management. If appropriate, arrangement is made for "Medications to Go" filled by an integrated retail pharmacy before discharge to prevent gaps in care. Next steps for development include implementing a pharmacist-to-pharmacist handoff between settings.

Case Management and Interprofessional Rounds

Case managers (CMs) are ideally positioned to impact outcomes with BPCI. Rather than replacing existing roles with the BPCI navigator, we chose a partnership model to maximize output from existing resources. Our CMs are unit-based RNs partnered with licensed master social workers assigned to multiple units for complex psychosocial needs. Daily huddles are held with the CMs to identify eligible BPCI patients and highlight the need for the next site of care assessment. Our organization holds daily interprofessional rounds, and team members receive a daily email with eligible BPCI patients and their LOS, which is discussed in rounds. Navigators provide support to this process but do not replace the existing resources charged with this responsibility. Potential gaps in care are discussed collaboratively and addressed by the person in the circle of care with the strongest relationship with the patient. Once the patient is ready for discharge, the navigator picks up the role of coordinator and links with the next site of care or the primary care RN CM to ensure the plan is translated across settings.

Physicians

Physicians in our transformation team began by reviewing opportunities for physician education to enhance documentation accuracy. A weekly review occurs by an internal medicine physician experienced in utilization review, and education is provided to physicians to enhance practice. Our team includes 3 physicians with internal medicine, geriatrics, and quality improvement background and experience. Two of the physicians rotate primary responsibility for communicating and coordinating transition to the long-term care (LTC) setting including physician-to-physician handoff. Partnered with the BPCI navigators, they review the plan of care for potential gaps in delivery. The intent is to pilot

this approach and then transition it to standard practice for hospitalist physicians to integrate handoff into their daily work for patients on discharge. Physicians in the clinically integrated network (CIN) are engaged through regular outcomes reporting to the Quality Improvement Committee and a Regional Steering Team. Next steps include physician-to-physician handoff to all postacute sites of care and active rounding in the LTC facilities to support proactive management of LOS and prevention of readmissions.

Cross-Continuum Team

Our biggest opportunity with the medical DRGs was to 1st build strong relationships with homecare agencies. Eighty percent of our population discharged with 1 agency. We partnered initially by holding virtual rounds on a weekly basis for the population in BPCI. By communicating weekly, we were able to actively marshal the resources of the hospital to engage earlier palliative care and disease management testing in the home setting. Process opportunities were found to enhance transitions, and a standard set of tools was created. A Fast Facts educational tool for homecare transitions and a transition report tool were built to enhance the knowledge transfer to the home setting.

Managing admissions to LTC agencies is key to achieving success in BPCI. At Mercy Health Saint Mary's, we had a strong relationship established with key LTC partners. A monthly collaborative of LTC clinical leaders and the Director of Clinical Resource Management reviews hospital readmissions and completes root cause analysis using the Interact Tool.[12] Findings from this review are translated into process improvements to affect root cause in the population. As the program grew, a preferred provider network including the clinical service director of medical and senior services was created. Business associate agreements were signed to facilitate sharing of clinical information, and a dashboard was developed of shared quality metrics that would be monitored to measure program success. Rather than creating this only for the BPCI population, this process improvement was implemented for all patients in the preferred LTC network to enhance delivery of care cross-continuum. Collaboration across settings affords the opportunity to build a seamless system of care.

Population Characteristics and Trends

Our expectation when we began the BPCI project was that we would be creating systems of care primarily for the elderly Medicare patient. What we did not expect is that 30% of the population would be young dual eligibles (Medicare/Medicaid). Our health system is located in the urban core, near services for the homeless population, and near many psychiatric case management agencies and provides care through an inpatient psychiatric medical unit, psychiatric beds, and our affiliated psychiatric hospital. The medical DRGs captured this population, and their 90-day care coordination was very complex due to active and unstable psychiatric diagnoses, active substance abuse, and homelessness. The DRGs that tended to capture more of this population were the following: 189 other respiratory (population with prevalent chronic obstructive pulmonary disease), nutritional metabolic (alcoholism, unstable psych), and GI hemorrhage/esophagitis (alcohol and cocaine/crack). These trends were noted in patient observation and interaction, and it was surprising to learn how little of this information translated into coding reports and volume reports because social determinants of health such as housing, substance abuse, and mental illness are not consistently captured in the EMR.

Another unexpected population characteristic was the prevalence of multiple medical conditions in the population and a strong theme of current cancer diagnoses (16%). This complicated coordination of care for the 90-day episode due to multiple specialists providing care and required a different level of integration with multiple providers across systems. Rather than replacing existing CMs, the BPCI navigators needed to learn how to build a community of support around the patient with the existing resources of CMs already engaged in care coordination. Many of the patients already had multiple CMs, and adding another CM to the mix was not value added. We chose a model of partnered intervention to preserve established relationships and facilitate efficiency of resources in the delivery model.

Ideally, coordination for BPCI patients occurs in a closed system of preferred providers with established relationships and shared quality metrics. Another population characteristic in the medical DRGs was the prevalence (50%) of patients with primary care physicians outside our CIN yet choosing our hospital for their source of emergency and acute care. This increased the complexity of care coordination and need for flexible processes of engagement from the BPCI navigators. The diversity of patients who entered the system with these medical DRGs also ended up choosing a variety of providers postdischarge because of previous relationships from other medical events and proximity to their home.

Although much of the literature is focused on controlling costs and coordination with transitions to LTC settings, we found that less than 20% of our population transitioned to this level of care. The largest group of patients (40%) discharged home with no follow-up service postdischarge. Because of this dynamic, the window to impact costs and quality of

care was strongly skewed toward the time of the inpatient admission.

One of the barriers to receiving homecare services is the homebound status requirement: if a patient is complex but able to leave the home, he/she is not qualified for the homecare benefit. A new aspect of the BPCI program is to pilot the waiver of homebound status to allow fragile, but mobile, patients the ability to have additional oversight and care on discharge.

Finally, the medical DRGs chosen for our site captured a population with multiple medical conditions that led them to be near end of life. Diagnosis-related groups such as nutritional/metabolic, cardiac arrhythmia, other respiratory, and syncope and collapse often indicated a complication of an underlying progressing condition, rather than a singular event. The integration of advance directive dialogs and provision of palliative care and hospice care are critically important to design into standard work for the BPCI team for stabilization and quality in the discharge plan. Integrating this aspect early into the care processes with a primary care physician would create a clearer path and understanding of the goals of care for all involved.

Conclusions

The proliferation of initiatives such as BPCI and other risk-based contracting presents opportunities to improve the cross-continuum system of care. Success is driven by leadership commitment to invest in the resources to attend to patient needs and the care delivery system redesign that is necessary for improving outcomes for the long term. New interprofessional roles and partnerships quickly emerge as key to effective strategy including integration of data analysts, financial analysts, coding and registration, and new cross-continuum partners, including partnering with competing healthcare providers. Attendance to the cultural change and new competencies this requires to partner outside traditional roles is an important aspect of program success.

Providers at the point of care can be a powerful creative force for improving delivery, but care must be taken to integrate these initiatives into an overall strategy to improve care for all patients, not only a subpopulation that is currently in a risk-based contract. Attempting to change the system in silos perpetuates the fragmentation that created poor outcomes in the current system. Staff at the point of care can become overwhelmed with multiple initiatives that are applied only to certain patients, which results in lack of adherence to changes in practice.

Closer scrutiny of populations in risk-based contracts can reveal challenging social determinants of health that were previously invisible to the healthcare system. Viewing the patient experience outside the walls of the hospital demands attendance to new areas of care intervention including mental health, substance abuse treatment, housing, transportation, safety, and access to care. Solving the barriers to care in this arena will require investment in community-based solutions with partners outside the traditional healthcare system.

Our intent with sharing our experience was to engage dialog about contributors to success with medical DRGs and conditions that do not lend themselves to distinct planned pathways for care intervention. Additional research is needed to identify the characteristics of patients with these conditions and the cross-continuum strategies that ensure success across organizations and multiple medical specialties, as well as the role of nursing leadership in these endeavors.

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