

**Physician-Focused Payment Model Technical Advisory Committee  
LOI: Environmental Scan & Relevant Literature**

**American College of Surgeons (ACS)  
Letter Dated: 10/12/2016  
Letter Received: 10/12/2016**

The ACS Advanced Alternative Payment Model is an episode-based payment model based on an updated version of the Episode Grouper for Medicare (EGM) software currently used by CMS for measuring resource use.

Unlike existing CMS Episode Payment Models, this will not require hospitalization allowing inclusion of procedures performed in the outpatient setting as well as episodes for acute and chronic conditions cared for by medical specialties.

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<b>Table 1. Environmental Scan</b>		
<i>Key words: Key words: American College of Surgeons; episode grouper for Medicare (EGM); episode-based payment; surgical</i>		
<b>Organization</b>	<b>Title</b>	<b>Date</b>
American College of Surgeons (ACS)	ACS Public Comment: Medicare Program; Advancing Care Coordination Through Episode Payment Models; Cardiac Rehabilitation Incentive Payment Model; And Changes to the Comprehensive Care for Joint Replacement Model (CMS-5519-P)	10/3/2016
<b>Purpose/Abstract</b>		
<p><b>Background:</b> CMS has been engaged since 2013 in testing various approaches to episode payment for Medicare FFS beneficiaries for 48 clinical episodes in the BPCI initiative. As of April 1, 2016, the BPCI initiative has 1,522 participants in the risk-bearing phase, comprised of 321 Awardees and 1,201 Episode Initiators. In November 2015, CMS released the Final Rule for the Comprehensive Care for Joint Replacement (CJR) model (80 FR 73274 through 73554), the first test of episode payment for Medicare FFS beneficiaries in which providers are required to participate. The CJR model began on April 1, 2016. In an effort to improve the efficiency and quality of care for Medicare beneficiaries receiving care for these common clinical conditions and procedures, CMS proposed three new EPs that include AMI, CABG, and SHFFT episodes.</p> <p><b>Summary:</b> This document contains the American College of Surgeon's response to CMS's proposed rule. The document outlined refinements to the BPCI Incentive Models, potential future event-based EPs (episode payment models) for procedures and medical conditions, adjustments for overlap with other innovation center models and CMS programs, quality measures, beneficiary choice and notification, and EPM financial arrangements.</p>		
<b>Additional Notes/Comments</b>		
<p><u><a href="https://www.regulations.gov/document?D=CMS-2016-0135-0001">Proposed Rule: https://www.regulations.gov/document?D=CMS-2016-0135-0001</a></u></p>		

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<b>Organization</b>	<b>Title</b>	<b>Date</b>
Centers for Medicare & Medicaid Services	2015 Supplemental QRURs and Episode-Based Payment Measurement	9/1/2016
<b>Purpose/Abstract</b>		
<p><b>Background:</b> The 2015 Supplemental Quality and Resource Use Reports (QRURs) are to provide actionable and transparent information that can help tax identification numbers (TINs) gauge and improve the efficiency of medical care provided to patients who have certain medical conditions or who are undergoing certain treatments. The use of episode groupers is part of Medicare’s shift from a system that rewards volume of service to one that rewards efficient, effective care and reduces delivery system fragmentation. Practitioners can use episode-based information to aid with their efforts to identify ways to provide more efficient care. The reports are therefore designed to assist TINs in identifying opportunities for coordination and efficiency improvements. To achieve this goal, the 2015 Supplemental QRURs provide information on TINs’ health care service utilization and costs to Medicare during episodes for common conditions and procedures.</p> <p><b>Summary:</b> This document details the methodology for the 2015 QRURs distributed by the Centers for Medicare &amp; Medicaid Services (CMS). CMS is constructing and reporting episodes of care in response to the mandate in Section 3003 of the Affordable Care Act (ACA) of 2010 and Section 131 of the Medicare Improvements for Patients and Providers Act (MIPPA) of 2008 that the Secretary of the Department of Health and Human Services (HHS) develop an episode grouper to improve care efficiency and quality and provide confidential reports for providers, respectively. To ensure that the 2015 Supplemental QRURs report comparable episodes, episodes for certain beneficiaries and certain individual episodes are excluded from reporting. The 2015 Supplemental QRURs: (1) presents the average payment-standardized, risk-adjusted cost to Medicare for episodes attributed to a TIN; and (2) attributes responsibility for each episode to one or more TINs and identify one or more lead eligible professionals (EPs) within the attributed TIN. The 2015 Supplemental QRURs report on group-level statistics and beneficiary-level data for the episodes of care attributed to each TIN. In response to stakeholder feedback CMS incorporated changes to the episodes, the methodology, and the report structure for the 2015 Supplemental QRURs.</p>		
<b>Additional Notes/Comments</b>		
<a href="https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Episode-Costs-and-Medicare-Episode-Grouper.html">https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Episode-Costs-and-Medicare-Episode-Grouper.html</a>		

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American College of Surgeons (ACS)	ACS Public Comment: Medicare Program; Merit-Based Incentive Payment Systems (MIPS) and Alternative Payment Model (APM) Initiative Under the Physician Fee Schedule, and Criteria for Physician-Focused Payment Models	6/27/2016
<b>Purpose/Abstract</b>		
<p><b>Background:</b> CMS was seeking comments on the new Merit-based Incentive Payment Systems (MIPS) established under the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). MIPS would consolidate components of three existing programs, the Physician Quality Reporting System (PQRS), the Physician Value-based Payment Modifier (VM), and the Medicare Electronic Health Record (EHR) Incentive Program for Eligible Professionals (EPs), and would continue the focus on quality, resource use, and use of certified EHR technology (CEHRT) in a cohesive program that avoids redundancies. This proposed rule also would establish incentives for participation in certain alternative payment models (APMs) and includes proposed criteria for use by the Physician-Focused Payment Model Technical Advisory Committee (PTAC) in making comments and recommendations on physician-focused payment models.</p> <p><b>Summary:</b> This document contains ACS' public comments on the MIPS and APM initiative. ACS highlights the following high-level issues: (1) amend the performance period; (2) reduce complexity; (3) increase reliability and validity, reduce misclassification; (4) include meaningful measures which follow the phases of surgical care; (5) reduce IT costs; (6) improve public reporting; (7) reduce thresholds for clinician engagement; (8) promote widespread interoperability; (9) modify current models to meet Advanced APM requirements so surgeons can participate; and (10) create pathways for new APMs for surgeons.</p>		
<b>Additional Notes/Comments</b>		
<p><a href="#">Proposed Rule</a></p>		

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<b>Organization</b>	<b>Title</b>	<b>Date</b>
American College of Surgeons (ACS)	ACS Statement to the Subcommittee on Health Committee on Energy and Commerce Committee United States House of Representatives - Medicare Access and CHIP Reauthorization Act of 2015: Examining Physician Efforts to Prepare for Medicare Payment Reforms	4/19/2016
<b>Purpose/Abstract</b>		
<p><b>Background:</b> The “Medicare Access and CHIP Reauthorization Act of 2015” (MACRA), was the bipartisan product of years of work to repeal the Sustainable Growth Rate (SGR). This bipartisan legislation permanently repealed the SGR formula and provided stability in Medicare base payments for the following four and a half years. Many organizations for years prior to MACRA’s passage have invested substantially in APMs, quality measures, and practice improvements that could serve as clinical practice improvement activities. The HELP subcommittee held a hearing to focus on the efforts major physician organizations have and are undertaking to prepare for the practice reforms needed to successfully navigate the implementation of the Medicare payment reforms under MACRA. ACS has made MACRA implementation a top priority and is working diligently to shape the new MIPS payment structure and develop APMs that meet the requirements of the law in order to provide options for surgeons.</p> <p><b>Summary:</b> This document contains the statement of the ACS to the Health Subcommittee of the Energy and Commerce Committee which was presented during a hearing on the MACRA legislation, on April 19, 2016. ACS highlighted the following specific areas of particular importance to surgeons related to MIPS implementation and alternative payment models. ACS discussed their comprehensive approach to surgical measurement following ten phases of surgical care and defined a set of metrics for cross-cutting comparisons. Additionally, ACS also emphasized the importance of meaningful use and that both MIPS and APMs will continue to require the use of certified electronic health record (EHR) technology in providing patient care. Lastly, ACS further states that they have the intention to present a proposal to CMS and CMMI by the end of 2016.</p>		
<b>Additional Notes/Comments</b>		

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<b>Organization</b>	<b>Title</b>	<b>Date</b>
Centers for Medicare & Medicaid Services	Method A. Episode Grouper for Medicare (EGM) Design Report	2/29/2016
<b>Purpose/Abstract</b>		
<p><b>Background:</b> Medicare and other third-party payers maintain very detailed records of reimbursements for individual health care services. In addition to support provider payment, these records represent a wealth of information about patterns of care and information about opportunities for improvement. The conceptual framework involves using an episode grouper (or “grouper”) to organize administrative claims data into episodes-of-care, or simply episodes, which are sets of services provided to care for an illness or injury during a defined period of time.</p> <p><b>Summary:</b> This design report describes the Episode Grouper for Medicare (EGM) tool with respect to its development and logical components. Potential uses for the EGM could include accountability, where cost outcomes could be linked to other performance domains; and performance improvement, where cost and utilization patterns could identify opportunities to coordinate care, and provide more efficient healthcare for individuals or populations.</p>		
<b>Additional Notes/Comments</b>		

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<b>Organization</b>	<b>Title</b>	<b>Date</b>
National Quality Forum	Evaluating Episode Groupers: A Report from the National Quality Forum	9/5/2014
<b>Purpose/Abstract</b>		
<p><b>Background:</b> Episode-based performance measurement is one approach to better understanding of the utilization and costs associated with certain conditions by grouping care into condition-specific or procedure-specific episodes. Episode grouper software tools are a generally accepted method for aggregating claims data into episodes to assess condition-specific utilization and costs. Using an episode grouper, healthcare services provided over a defined period of time can be analyzed and grouped by specific clinical conditions to generate an overall picture of the services used to manage that condition. Episode grouper software products developed by different vendors use significantly different methods to group and attribute claims to episodes.</p> <p><b>Summary:</b> With funding from the Department of Health and Human Services (HHS), the National Quality Forum (NQF), convened an Expert Panel to define the characteristics and challenges of constructing episode groupers; determine an initial set of criteria by which episode groupers should be evaluated; and identify implications and considerations for NQF endorsement of episode groupers. The Panel did not focus on a particular grouper or product. It instead recommended criteria that can be applied to any episode grouper that may be submitted for evaluation.</p> <p><b>Findings:</b> The Expert Panel recommended the following submission items for evaluation: descriptive information on the intent and planned use of the grouper; the clinical logic and data required for grouping claims; and reliability and validity testing. The Panel emphasized the importance of understanding the intent and planned use for evaluating potential threats to validity and possible unintended consequences of using the grouper. The recommended evaluation criteria for episode groupers are based on the standard NQF Measure Evaluation Criteria, and include scientific acceptability (reliability and validity), feasibility, and usability and use. The Panel did not recommend the application of the importance to measure and report or related and competing criteria. Further input from NQF's Consensus Standards Approval Committee (CSAC) affirmed the complexity of issues regarding the submission and evaluation of episode groupers. The key elements of a qualitative, peer review process are outlined as a foundation for further work to shape the actual process that would be used in NQF's initial effort to evaluate episode groupers.</p>		
<b>Additional Notes/Comments</b>		
<a href="http://www.qualityforum.org/Publications/2014/09/Evaluating_Episode_Groupers_A_Report_from_the_National_Quality_Forum.aspx">http://www.qualityforum.org/Publications/2014/09/Evaluating_Episode_Groupers_A_Report_from_the_National_Quality_Forum.aspx</a>		

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<b>Organization</b>	<b>Title</b>	<b>Date</b>
American College of Surgeons (ACS)	Surgeons and Bundled Payment Models: A Primer for Understanding Alternative Physician Payment Approaches	4/1/2013
<b>Purpose/Abstract</b>		
<p><b>Background:</b> Medicare physician reimbursement in the United States has been criticized for rewarding physicians for the quantity of care they provide rather than for quality or value of services. As a result, proposed policy changes include models of delivery of health care and payment that are centered on coordination of care. This focus on coordinate of care is intended to increase efficiency while maintaining quality. Bundled payment is one approach that both Congress and the private sector are exploring in an effort to promote more coordinated and efficient care across different providers or settings. Surgeon knowledge of these programs and their implications will be critical to the successful implementation of bundled payment as an alternative payment model for surgical procedures. Objective: The ACS General Surgery Coding and Reimbursement Committee (GSCRC) developed this primer to inform ACS Fellows about the concept of bundled payments and existing bundled payment programs. It also discusses the GSCRC Surgical Bundled Care Project, and presents concepts to consider in deciding whether to participate in a bundled payment model.</p> <p><b>Summary:</b> This primer includes the following topics: the identification of a surgical bundled payment, describing existing bundled payment programs, the role of the ACS General Surgery Coding and Reimbursement Committee, issues to consider when developing a bundle, things to consider regarding bundled payment, and provides additional resources such as information on a surgical bundled care project.</p>		
<b>Additional Notes/Comments</b>		
See pg. 16 Addendum A. Surgical Bundled Care Project		



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<b>Organization</b>	<b>Title</b>	<b>Date</b>
National Quality Forum	Patient-Focused Episodes of Care Measurement Framework: Evaluating Efficiency Across Patient-Focused Episodes of Care	1/1/2010
<b>Purpose/Abstract</b>		
<p><b>Background:</b> NQF sought to develop a comprehensive measurement framework in order to evaluate efficiency, and ultimately value, across patient-focused episodes of care—that is, the care of people over the course of an episode of illness. To provide guidance to key stakeholder groups in accelerating toward a high-performing, high-value healthcare system, the National Quality Forum (NQF) convened a Steering Committee to develop a framework for evaluating the efficiency of care over time, including clear definitions and a shared vision of what can be achieved around quality, cost, and value, serving as a foundation for the work of larger performance improvement efforts.</p> <p><b>Summary:</b> This report presents the NQF-endorsed® measurement framework for assessing efficiency, and ultimately value, associated with the care over the course of an episode of illness and sets forth a vision to guide ongoing and future efforts. The framework consists of: key terms and definitions, an explanation of the patient-focused episode of care approach, domains for performance measurement for evaluating efficiency, and guiding principles.</p>		
<b>Additional Notes/Comments</b>		
<p><a href="http://www.qualityforum.org/Publications/2010/01/Measurement_Framework_Evaluating_Efficiency_Across_Patient-Focused_Episodes_of_Care.aspx">http://www.qualityforum.org/Publications/2010/01/Measurement_Framework_Evaluating_Efficiency_Across_Patient-Focused_Episodes_of_Care.aspx</a></p>		

Table 2. Relevant Literature		
Key words: American College of Surgeons; episode grouper for Medicare (EGM); episode-based payment; surgical		
Journal	Title	Date
JAMA Surgery	Variation in Medicare Expenditures for Treating Perioperative Complications: The Cost of Rescue	10/5/2016
Purpose/Abstract		
<p><b>Background:</b> Treating surgical complications presents a major challenge for hospitals striving to deliver high-quality care while reducing costs. Costs associated with rescuing patients from perioperative complications are poorly characterized.</p> <p>Objective: To evaluate differences across hospitals in the costs of care for patients surviving perioperative complications after major inpatient surgery.</p> <p><b>Design, Setting, and Participants:</b> A retrospective cohort study using claims data from the Medicare Provider Analysis and Review files was completed to compare payments for patients who died vs patients who survived after perioperative complications had occurred. Hospitals were stratified using average payments for patients who had survived from complications and payment components were analyzed across hospitals. The administrative claims database of surgical patients were analyzed at hospitals treating Medicare patients nationwide. This study included Medicare patients aged 65 to 100 years who underwent abdominal aortic aneurysm repair (n = 69,207), colectomy for cancer (n = 107,647), pulmonary resection (n = 91,758), and total hip replacement (n = 307,399) between 2009 and 2012. The data analysis took place from November 2015 through March 2016.</p> <p><b>Exposures:</b> The exposures of interest included the patients' clinical outcome of surgery (eg, no complication, complication and death, or complication and survival) and the individual hospital where a patient received an operation.</p> <p><b>Main Outcomes and Measures:</b> The main outcomes and measures examines included risk-adjusted, price-standardized Medicare payments for an episode of surgery. Additionally, risk-adjusted perioperative outcomes were also assessed.</p> <p><b>Results:</b> The mean age for Medicare beneficiaries in this study ranged from 74.1 years (pulmonary resection) to 78.2 years (colectomy). The proportion of male patients ranged from 37% (total hip replacement) to 77% (abdominal aortic aneurysm repair), and most patients were white. Among patients who experienced complications, those who were rescued had higher price-standardized Medicare payments than did those who died for all 4 operations. Assessing variation across hospitals, payments for patients who were rescued at the highest cost-of-rescue hospitals were 2- to 3-fold higher than at the lowest cost-of-rescue hospitals for abdominal aortic aneurysm repair (\$60 456 vs \$23 261; P &lt; .001), colectomy (\$56 787 vs \$22 853; P &lt; .001), pulmonary resection (\$63 117 vs \$21 325; P &lt; .001), and total hip replacement (\$41 354 vs \$19 028; P &lt; .001). Compared with lowest cost-of-rescue hospitals, highest cost-of-rescue hospitals had higher risk-adjusted rates of serious complications with similar rates of failure to rescue and overall 30-day mortality.</p> <p><b>Conclusions and Relevance:</b> After four selected inpatient operations, a substantial variation was observed across hospitals regarding Medicare episode payments for patients rescued from perioperative complications. Notably, higher Medicare payments were not associated with improved clinical performance. These findings highlight the potential for hospitals to target the efficient treatment of perioperative complications in cost-reduction efforts.</p>		
Additional Notes/Comments		
<a href="https://www.ncbi.nlm.nih.gov/pubmed/27706473">https://www.ncbi.nlm.nih.gov/pubmed/27706473</a>		

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Key words: American College of Surgeons; episode grouper for Medicare (EGM); episode-based payment; surgical		
Journal	Title	Date
JAMA Surgery	Implications of the Definition of an Episode of Care Used in the Comprehensive Care for Joint Replacement Model	9/28/2016
Purpose/Abstract		
<p><b>Background:</b> Under the Comprehensive Care for Joint Replacement (CJR) model, hospitals are held accountable for nearly all Medicare payments that occur during the initial hospitalization until 90 days after hospital discharge (ie, the episode of care). It is not known whether unrelated expenditures resulting from this "broad" definition of an episode of care will affect participating hospitals' average episode-of-care payments.</p> <p><b>Objective:</b> The study objective was to compare the CJR program's broad definition of an episode of care with a clinically narrow definition of an episode of care.</p> <p><b>Design, Setting, and Participants:</b> We identified Medicare claims for 23,251 patients in Michigan who were Medicare beneficiaries and who underwent joint replacement during the period from 2011 through 2013 at hospitals located in metropolitan statistical areas. Using specifications from the CJR model and the clinically narrow Hospital Compare payment measure, we constructed episodes of care and calculated 90-day episode payments. We then compared hospitals' average 90-day episode payments using the 2 definitions of an episode of care and fit linear regression models to understand whether payment differences were associated with specific hospital characteristics (average Centers for Medicare &amp; Medicaid Services-hierarchical condition categories risk score, rural hospital status, joint replacement volume, percentage of Medicaid discharges, teaching hospital status, number of beds, percentage of joint replacements performed on African American patients, and median income of the hospital's county). We performed analyses from July 1 through October 1, 2015.</p> <p><b>Main Outcomes and Measures:</b> The outcomes and measures that were examined included the correlation and difference between average 90-day episode payments using the broad definition of an episode of care in the CJR model and the clinically narrow Hospital Compare definition of an episode of care.</p> <p><b>Results:</b> We identified 23,251 joint replacements (ie, episodes of care). The 90-day episode payments using the broad definition of the CJR model ranged from \$17 349 to \$29 465 (mean [SD] payment, \$22 122 [\$2600]). Episode payments were slightly lower (mean payment, \$21 670) when the Hospital Compare definition was used. Both methods were strongly correlated (<math>r = 0.99</math>, <math>P &lt; .001</math>). The average payment difference between these 2 types of episodes of care was small (mean [SD], \$452 [\$177]; range, \$73-\$1006). In our multivariable analysis, we found that the hospital characteristics examined had a minimal impact or no impact on the payment differential.</p> <p><b>Conclusions and Relevance:</b> The average 90-day episode payments determined by both definitions of an episode of care were strongly correlated, and there was a small payment differential for most hospitals. In the context of joint replacement bundled payments, these data suggest that hospital performance will be consistent whether a broad or clinically narrow definition of an episode of care is used.</p>		
Additional Notes/Comments		
<a href="https://www.ncbi.nlm.nih.gov/pubmed/27682525">https://www.ncbi.nlm.nih.gov/pubmed/27682525</a>		

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Journal	Title	Date
International journal of spine surgery	Impact of a Bundled Payment System on Resource Utilization During Spine Surgery	5/16/2016
Purpose/Abstract		
<p><b>Background:</b> In a bundled payment system, a single payment covers all costs associated with a single episode of care. Spine surgery may be well suited for bundled payments because of clearly defined episodes of care, but the impact on current practice has not been studied. We sought to examine how a theoretical bundled payment strategy with financial disincentives to resource utilization would impact practice patterns.</p> <p><b>Methods:</b> A multiple-choice survey was administered to spine surgeons describing eight clinical scenarios. Respondents were asked about their current practice, and then their practice in a hypothetical bundled payment system. Respondents could choose from multiple types of implants, bone grafts, and other resources utilized at the surgeon's discretion.</p> <p><b>Results:</b> Forty-three respondents completed the survey and within each scenario, 24%-49% of respondents changed at least one aspect of management. The proportion of cases performed without implants was unchanged for four scenarios and increased in four by an average of 8%. The use of autologous iliac crest bone graft increased across all scenarios by an average of 18%. Additionally, the use of neuromonitoring decreased in all scenarios by an average of 21%. Any differences in costs were not found to be statistically significant.</p> <p><b>Conclusions:</b> Financial disincentives to resource utilization may result in some changes to surgeons' practices but these appear limited to items with less clear benefits to patients. The choices of implants, which account for the majority of intra-operative costs, did not change meaningfully. Furthermore, a bundling strategy targeting peri-operative costs solely related to surgical practice may not yield substantive savings while rationing potentially beneficial treatments to patient care.</p>		
Additional Notes/Comments		

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Journal	Title	Date
Clinical Orthopaedics and Related Research	What Drives Variation in Episode-of-care Payments for Primary TKA? An Analysis of Medicare Administrative Data	6/30/2015
Purpose/Abstract		
<p><b>Background:</b> Episode-of-care payments are defined as a single lump-sum payment for all services associated with a single medical event or surgery and are designed to incentivize efficiency and integration among providers and healthcare systems. A TKA is considered an exemplar for an episode-of-care payment model by many policymakers, but data describing variation payments between hospitals for TKA are extremely limited.</p> <p><b>Purpose:</b> We asked: (1) How much variation is there between hospitals in episode-of-care payments for primary TKA? (2) Is variation in payment explained by differences in hospital structural characteristics such as teaching status or geographic location, patient factors (age, sex, ethnicity, comorbidities), and discharge disposition during the postoperative period (home versus skilled nursing facility)? (3) After accounting for those factors, what proportion of the observed variation remains unexplained?</p> <p><b>Methods:</b> We used Medicare administrative data to identify fee-for-service beneficiaries who underwent a primary elective TKA in 2009. After excluding low-volume hospitals, we created longitudinal records for all patients undergoing TKAs in eligible hospitals encompassing virtually all payments by Medicare for a 120-day window around the TKA (30 days before to 90 days after). We examined payments for the preoperative, perioperative, and postdischarge periods based on the hospital where the TKA was performed. Confounding variables were controlled for using multivariate analyses to determine whether differences in hospital payments could be explained by differences in patient demographics, comorbidity, or hospital structural factors.</p> <p><b>Results:</b> There was considerable variation in payments across hospitals. Median (interquartile range) hospital preoperative, perioperative, postdischarge, and 120-day payments for patients who did not experience a complication were USD 623 (USD 516-768), USD 13,119 (USD 12,165-14,668), USD 8020 (USD 6403-9933), and USD 21,870 (USD 19,736-25,041), respectively. The variation cannot be explained by differences among the hospital structures. Median (interquartile range) episode payments were greater for hospitals in the Northeast (USD 26,291 [22,377-30,323]) compared with the Midwest, South, and West (USD 20,614, [USD 18,592-22,968]; USD 21,584, [USD 19,663-23,941]; USD 22,421, [USD 20,317-25,860]; <math>p &lt; 0.001</math>) and for teaching compared with nonteaching hospitals (USD 23,152 [USD 20,426-27,127] versus USD 21,336 [USD 19,352-23,846]; <math>p &lt; 0.001</math>). Patient characteristics explained approximately 15% of the variance in hospital payments, hospital characteristics (teaching status, geographic region) explained 30% of variance, and approximately 55% of variance was not explained by either factor.</p> <p><b>Conclusions:</b> Given that there is much unexplained variation in episode-of-care payments at the hospital-level, it suggests that there are opportunities for enhanced efficiency. Further research is needed to ensure an appropriate balance between such efficiencies and access to care.</p>		
Additional Notes/Comments		
<a href="https://www.ncbi.nlm.nih.gov/pubmed/26239239">https://www.ncbi.nlm.nih.gov/pubmed/26239239</a>		

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Journal	Title	Date
Health Services Research	Medicare Payments for Common Inpatient Procedures: Implications for Episode-Based Payment Bundling	12/1/2010
Purpose/Abstract		
<p><b>Background:</b> Aiming to align provider incentives toward improving quality and efficiency, the Center for Medicare and Medicaid Services is considering broader bundling of hospital and physician payments around episodes of inpatient surgery. The decisions around bundled payments would benefit from better information about how payments are currently distributed among providers of different perioperative services and how payments vary across hospitals.</p> <p><b>Study Design:</b> Using the national Medicare database, we identified patients undergoing one of four inpatient procedures in 2005 (coronary artery bypass [CABG], hip fracture repair, back surgery, and colectomy). For each procedure, the price-standardized Medicare payments from the date of admission for the index procedure to 30 days postdischarge were assessed and categorized by payment type (hospital, physician, and postacute care) and subtype.</p> <p><b>Results:</b> Average total payments for inpatient surgery episodes varied from U.S.\$26,515 for back surgery to U.S.\$45,358 for CABG. Hospital payments accounted for the largest share of total payments (60–80 percent, depending on procedure), followed by physician payments (13–19 percent) and postacute care (7–27 percent). Overall episode payments for hospitals in the lowest and highest payment quartiles differed by U.S.\$16,668 for CABG, U.S.\$18,762 for back surgery, U.S.\$10,615 for hip fracture repair, and U.S.\$12,988 for colectomy. The payments to hospitals accounted for the largest share of variation in payments. Among specific types of payments, those associated with 30-day readmissions and postacute care varied most substantially across hospitals.</p> <p><b>Conclusions:</b> Fully bundled payments for inpatient surgical episodes would need to be dispersed among many different types of providers. Hospital payments—both overall and for specific services—vary considerably and might be reduced by incentives for hospitals and physicians to improve quality and efficiency.</p>		
Additional Notes/Comments		
<a href="http://onlinelibrary.wiley.com/doi/10.1111/j.1475-6773.2010.01150.x/full">http://onlinelibrary.wiley.com/doi/10.1111/j.1475-6773.2010.01150.x/full</a>		

Table 2. Relevant Literature		
Key words: American College of Surgeons; episode grouper for Medicare (EGM); episode-based payment; surgical		
Journal	Title	Date
Health Care Financing Review	Clinician Feedback on Using Episode Groupers with Medicare Claims Data	Fall 2009
Purpose/Abstract		
<p><b>Background:</b> CMS is investigating techniques that might help identify costly physician practice patterns. One method presently under evaluation is to compare resource use for certain episodes of care using commercially available episode grouping software. Although this software has been used by the private sector to classify insured individuals' medical claims into episodes of care, it has never been used with fee-for-service Medicare claims except in the studies by the Medicare Payment Advisory Commission (MedPAC) and CMS.</p> <p><b>Methods:</b> Two panel discussions were organized at four large multi-specialty group practices. For each panel, 8 to 12 clinicians met for approximately three hours to discuss episode grouping issues, a total of 80 mostly physician participants for all of the panels. The composition of each panel was influenced by the type of condition that was to be discussed. Most panel participants were not familiar with episode grouping software and value based purchasing concepts. In addition to examining overarching episode design issues, each panel also focused on one of the following five clinical conditions: chronic obstructive pulmonary disease (COPD), hip fractures, diabetes, congestive heart failure (CHF), and coronary artery disease (CAD). Two clinical conditions were discussed at each site. Design issues were identified by comparing the relationship of grouped claims and claims types across episodes to expected treatment patterns. Claims analysis was conducted at the "base episode" level, without incorporating risk adjustment methodologies or severity levels (i.e., 4 disease stages in MEG and up to 4 severity levels in ETG). Rather than quantifying positions taken (such as the percentage advocating a particular position), this study used a qualitative approach to synthesize the positions, arguments, and insights provided.</p> <p><b>Results:</b> This article reported clinician's reactions to seven episode grouper design issues: (1) grouping physician claims with an IP hospital stay, (2) grouping an IP stay with SNF claims, (3) grouping an IP stay with HH claims, (4) excluding certain claims types, (5) grouping complications of medical and surgical care, (6) grouping acute exacerbations, and (7) defining the duration of chronic episodes. In addition, concerns were voiced about validating the grouper logic, risk adjustment, homogeneity of episode costs, adequate sample size, the validity of peer groups, transparency, actionable information, quality performance, and rural issues.</p> <p><b>Conclusion:</b> The panel reactions show the importance of bringing persons with clinical knowledge into the development process. The clinician feedback confirms that additional research is needed and will be an indispensable element in the execution of this research.</p>		
Additional Notes/Comments		

<b>Table 2. Related Literature</b>		
<i>Key words: American College of Surgeons; episode grouper for Medicare (EGM); episode-based payment; surgical</i>		
<b>Journal</b>	<b>Title</b>	<b>Date</b>
Center for Healthcare Quality & Payment Reform (CHQPR)	Paths to Healthcare Payment Reform: Transitioning to Episode-Based Payment	Accessed on: 10/19/2016
<b>Purpose/Abstract</b>		
<p><b>Background:</b> CMS supports the innovation of Alternative Payment Methods (APM) and one of the methods proposed is the use of episodes of care, which would take away incentives of over utilizations as well as hold medical providers accountable for high quality of care of patients.</p> <p><b>Summary:</b> This CHQPR policy brief describes how to define an episode payment and how to transition to episode payment. Additionally this article recommends important steps to achieve a full transition to episodes of care.</p>		
<b>Additional Notes/Comments</b>		



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Journal	Title	Date
Health Affairs	Better Patients Care at High-Quality Hospitals May Save Medicare Money and Bolster Episode-Based Payment Models	9/1/2016
Purpose/Abstract		
<p><b>Background:</b> US policy makers are making efforts to simultaneously improve the quality of and reduce spending on health care through alternative payment models such as bundled payment. Bundled payment models are predicated on the theory that aligning financial incentives for all providers across an episode of care will lower health care spending while improving quality. Whether this is true remains unknown.</p> <p><b>Methods:</b> Using national Medicare fee-for-service claims for the period 2011–12 and data on hospital quality, researchers evaluated how thirty- and ninety-day episode-based spending were related to two validated measures of surgical quality—patient satisfaction and surgical mortality. Results: Researchers found that patients who had major surgery at high-quality hospitals cost Medicare less than those who had surgery at low-quality institutions, for both thirty- and ninety-day periods. The difference in Medicare spending between low- and high-quality hospitals was driven primarily by post acute care, which accounted for 59.5 percent of the difference in thirty-day episode spending, and readmissions, which accounted for 19.9 percent.</p> <p><b>Conclusion:</b> These findings suggest that efforts to achieve value through bundled payment should focus on improving care at low-quality hospitals and reducing unnecessary use of postacute care.</p>		
Additional Notes/Comments		

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Journal	Title	Date
Journal of Bone and Joint Surgery	Alternative Reimbursement Models: Bundled Payment and Beyond: AOA Critical Issues	6/1/2016
Purpose/Abstract		
<p><b>Background:</b> The Bundled Payments for Care Improvement (BPCI) initiative begun in January 2013 by the U.S. Centers for Medicare &amp; Medicaid Services (CMS) through its Innovation Center authority, which was created by the U.S. Patient Protection and Affordable Care Act (PPACA). The BPCI program seeks to improve health-care delivery and to ultimately reduce costs by allowing providers to enter into prenegotiated payment arrangements that include financial and performance accountability for a clinical episode in which a risk-and-reward calculus must be determined. BPCI is a contemporary 3-year experiment designed to test the applicability of episode-based payment models as a viable strategy to transform the CMS payment methodology while improving health outcomes.</p> <p><b>Summary:</b> A summary of the 4 models being evaluated in the BPCI initiative is presented in addition to the awardee types and the number of awardees in each model. Data from one of the BPCI-designated pilot sites demonstrate that strategies do exist for successful implementation of an alternative payment model by keeping patients first while simultaneously improving coordination, alignment of care, and quality and reducing cost. Providers will need to embrace change and their areas of opportunity to gain a competitive advantage. Health-care providers, including orthopedic surgeons, health-care professionals at post-acute care institutions, and product suppliers, all have a role in determining the strategies for success. Open dialogue between CMS and awardees should be encouraged to arrive at a solution that provides opportunity for gainsharing, as this program continues to gain traction and to evolve.</p>		
Additional Notes/Comments		

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Journal	Title	Date
Health Affairs	Large Variations in Medicare Payments For Surgery Highlight Savings Potential From Bundled Payment Programs	11/1/2011
Purpose/Abstract		
<p><b>Background:</b> Payers are considering bundled payments for inpatient surgery, combining provider reimbursements into a single payment for the entire episode.</p> <p><b>Methods:</b> This study was based on complete Medicare claims data for a sample of patients undergoing selected inpatient procedures from January 2005 through November 2007. Authors identified patients undergoing surgery from the inpatient Medicare Provider Analysis and Review file based on the presence of the appropriate procedure codes from the International Classification of Diseases, Ninth Revision (ICD-9) (specific codes are available from the authors on request). Records were linked for each of these cases to other CMS files containing claims potentially relevant to the surgical episode, including the carrier (that is, the physician), outpatient, home health, skilled nursing facility, long-stay hospital, and durable medical equipment files. Patients undergoing specific inpatient procedures were identified.</p> <p><b>Findings:</b> Authors found that current Medicare episode payments for certain inpatient procedures varied by 49–130 percent across hospitals sorted into five payment groups. Intentional differences in payments attributable to such factors as geography or illness severity explained much of this variation. But after adjustment for these differences, per episode payments to the highest-cost hospitals were higher than those to the lowest-cost facilities by up to \$2,549 for colectomy and \$7,759 for back surgery. Post discharge care accounted for a large proportion of the variation in payments, as did discretionary physician services, which may be driven in turn by variations in surgeons' practice styles.</p> <p><b>Conclusions:</b> This study suggests that bundled payments could yield sizable savings for payers, although the effect on individual institutions will vary because hospitals that were relatively expensive for one procedure were often relatively inexpensive for others. More broadly, the data examined suggest that many hospitals have considerable room to improve their cost efficiency for inpatient surgery and should look for patterns of excess utilization, particularly among surgical specialties, other inpatient specialist consultations, and various types of post discharge care.</p>		
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<b>Journal</b>	<b>Title</b>	<b>Date</b>
New England Journal of Medicine (NEJM): Perspective Article	Opportunities and Challenges for Episode-Based Payment	9/1/2011
<b>Purpose/Abstract</b>		
<p><b>Summary:</b> This NEJM perspective article outlines some opportunities and challenges associated with episode-based payments.</p>		
<b>Additional Notes/Comments</b>		

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Journal	Title	Date
Health Affairs	Episode-Based Performance Measurement And Payment: Making it a Reality	10/1/2009
Purpose/Abstract		
<p><b>Background:</b> Proposals to use episodes of care as a basis for payment and performance measurement are largely conceptual at this stage, with little empirical work or experience in applied settings to guide their design.</p> <p><b>Methods:</b> Episodes of care were constructed using two commercially available episode grouper tools: the Symmetry Episode Treatment Groups (ETGs) and the Thomson Medical Episode Groups (MEGs). These grouper tools define condition specific episodes of care.<sup>12</sup> Because of the similarity in results, we discuss only the findings from the ETG-constructed episodes. Although the results are affected by underlying logic of how each tool assigns claims to episodes, we believe that the issues we highlight are salient under any method of episode construction.</p> <p><b>Findings:</b> The authors illustrate several key design issues and suggest a number of applied studies and demonstrations that would facilitate more rapid movement of episode-based approaches from concept to implementation</p> <p><b>Conclusions:</b> Given the policy emphasis on measurement and payment for individual services delivered by individual providers in separate settings of care, the authors recommendations outlined in this article help serve as a starting point for a more robust testing agenda.</p>		
Additional Notes/Comments		

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Journal	Title	Date
Health Care Financing Review	Need for Risk Adjustment in Adapting Episode Grouping Software to Medicare Data	Summer 2009
Purpose/Abstract		
<p><b>Background:</b> Episode grouper software offers a potential framework for developing important components of a pay-for-performance system for healthcare providers. If the costs for treating health conditions can be computed, then policymakers can in principle benchmark different providers' cost distributions and reward the most efficient.</p> <p><b>Methods:</b> This article applies two of the most prominent commercial groupers and examines the properties of the cost distributions calculated for their constructed episodes.</p> <p><b>Findings &amp; Conclusion:</b> The analysis reveals that episode cost distributions exhibit substantial variation and skewness, suggesting the need for innovative risk adjustment methods prior to utilizing groupers for the purpose of physician profiling.</p>		
Additional Notes/Comments		