March 1, 2016

Andrew M. Slavitt
Acting Administrator
Centers for Medicare & Medicaid Services
Department of Health and Human Services
Attention: CMS–3321–NC
Mail Stop C4–26–05
7500 Security Boulevard
Baltimore, MD 21244–1850

Re: Centers for Medicare and Medicaid Services Request for Information Regarding CMS Episode Groups

Dear Acting Administrator Slavitt:

The American College of Radiology (ACR), representing more than 36,000 diagnostic radiologists, interventional radiologists, radiation oncologists, nuclear medicine physicians and medical physicists, appreciates the opportunity to submit comments to the Centers for Medicare & Medicaid Services (CMS) on the Request for Information (RFI) regarding CMS-developed Episode Groupers.

The Medicare Access and CHIP Reauthorization Act (MACRA) has the potential to improve the delivery and outcome of care for Medicare patients. The ACR is committed to working collaboratively with the Centers for Medicare and Medicaid Services (CMS) and others to develop and share meaningful recommendations as regulations are prepared that will shape the delivery of health care services for years to come.

General Comments

Radiologists are physicians trained in the diagnostic and/or therapeutic use of x-rays (radiography, fluoroscopy, computed tomography (CT), and radiation therapy), diagnostic ultrasound (US), magnetic resonance imaging (MRI) and radionuclides (nuclear medicine and radionuclide therapy), interventional radiology, medical physics, and radiation biology. Radiologists train more extensively after medical school than most physicians. Specialization in radiology typically requires five to seven years of additional residency training and demonstrated proficiency in physics and advanced medical technology. The ACR and its members believe that the highest quality imaging care is delivered by radiologists certified by the American Board of Radiology practicing at accredited sites and supervising and interpreting imaging studies that meet appropriateness guidelines.

Radiologists are the experts in diagnostic imaging and have a long track record and ongoing commitment to developing and continuously improving the systems and scientific tools which
facilitate efficient medical diagnosis, medical imaging, and patient care. Radiologists who practice at this level of quality do so with significant associated costs but the benefits to our patients are also extremely significant. We offer this definition so that CMS may understand the complexities of radiology which involve both patient facing and non-patient-facing activities, the contributions of diagnosis, and therapeutic services as well as many quality programs and data registries.

CMS-Provided Background on CMS Episode Group RFI

CMS has solicited stakeholder input on the episode groups that it has developed pursuant to section 3003 of the Affordable Care Act (ACA) and section 101(f) of the MACRA. CMS seeks stakeholder input on the future role of episode groups in resource use measurement, which have previously been used in feedback reports on resource use to physician group practices, in hospital quality reporting programs and to support bundled payment.

Merit-Based Incentive Payment System

Additionally, with the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), CMS must establish the new Merit-Based Incentive Payment System (MIPS). The MIPS will assess the performance of eligible professionals in four categories: quality, resource use, meaningful use of certified EHR technology, and clinical practice improvement activities. MACRA also creates payment incentives for physicians and other eligible professionals to join alternative payment models (APMs).

Beginning in 2019, CMS is required to provide for a composite performance score based upon the four categories listed and use the composite performance score to determine a MIPS adjustment factor for MIPS eligible professionals. It is anticipated that performance will be based on services provided in 2017 – next year. Resource use measures will comprise not more than 10 percent of the MIPS composite performance score in the first year, not more than 20 percent in the second year and 30 percent thereafter.

Considerations in defining episode groups

Episode group methodology Method A was developed to fulfill certain requirements of the Affordable Care Act. Method B was developed to complement those efforts and provide a more robust measure set in the ACA mandated CMS Supplemental Quality Resource Use Reports (QRURs).

Aligning Attribution with Intended Use

The episodes reported in the Supplemental QRURs were created to allow medical groups or solo practices to evaluate their resource use on conditions and procedures that are costly and prevalent in the Medicare Fee for Service (FFS) population. Episodes are attributed to the one or more group practices most responsible for the patient’s care. Aligning attribution with patient relationship to providers will require consideration of the configuration of episode groups.
CMS seeks comments on the episode groups provided for in Appendix B of the RFI and described in the supplemental materials, suggestions and rationale for additional episode groups, and responses to certain questions. CMS also has asked for feedback on methodologies used, and other aspects of the episode groups.

Care Episode and Patient Condition Groups

The MACRA mandates that CMS establish care episode groups and patient condition groups, and related classification codes, to measure resource use and to account for a target of an estimated one-half of expenditures under Parts A and B.

Regarding the care episode and patient condition groups, CMS asks for suggestions on episode groups and patient condition groups focused on top conditions and procedures within a specialty.

Both Method A and B episodes are focused on diagnosed disease (acute or chronic conditions) or specific interventions to treat disease. There is little attention to diagnosis or the diagnostic process, and some limited accounting for follow-up, but the latter is generally tied to a short period of time following intervention and not to ongoing monitoring for a disease at risk for exacerbation.

There are episode possibilities for what are referred to in Method A as sequelae episodes, that include exacerbations of illness, but no logic in either method to address episodes or episode modifiers that capture the value of prevention or early intervention. It is notable how little focus there is on prevention, disease surveillance and diagnosis. This is a limitation of the system and a specific limitation for diagnostic radiologists for possible non-face-to-face service episodes.

There are two types of episodes within Method A: Type A (primary episode) and Type B (ancillary episode). For Type B there might be episode concepts for non-patient facing providers - a separate ancillary or diagnostic episode, for example CT to rule out appendicitis might be an episode or sub-category determination metric. Other possibilities are management of “incidentalomas” or care associated with biopsies. However, these pose challenges for stratification within the administrative claims code sets, even with ICD-10. Risk stratification is a “black box” but one that radiologists might greatly impact through diagnostic studies.

CMS seeks input on specific clinical criteria and patient characteristics to be used for patient classification into care episode groups and condition groups, as well as aggregation rules and narrowing episodes into finer categories, particularly for patients with multiple chronic care conditions.

In Method B, CMS has a particular set of criteria that include or exclude services from episode cost metrics based on whether they contribute significant cost to the episode. Where low cost services contribute to quality outcomes, or to minimizing other costs, these criteria may exclude some information from the episode logic that would help differentiate between sub-types of episodes, or in risk adjusting episode cost estimation. This may apply to some low cost yet high value diagnostic radiology procedures, such as breast imaging. Another possible sub-type might be diagnostic imaging procedures that result in minimal or no intervention such as appropriate use
of CT for suspected appendicitis versus exploratory surgery. This subtype could also apply to low volume interventions that represent new technologies that do not have high cost, or novel uses of older technologies. It is difficult to see how such change in clinical practice would be incorporated into episode logic over time.

**CMS seeks comments on specific issues that should be considered when developing resource use measures applicable to professionals who do not typically have face-to-face interaction with a patient, and how to simultaneously measure resource use based upon patient relationship while promoting care coordination and patient centrality.**

The ACR wishes to preface comments regarding resource use measures applicable to our physician members with the following general, supportive comments.

The ACR supports cost effective, evidence-based care that aligns with the Triple Aim of better quality, lower costs and better care for patients. Therefore, for the quality of care to improve across the healthcare delivery system, CMS must ensure that the role of specialists and their non-physician providers in delivering quality care is recognized and rewarded. The ACR is developing several methods of controlling costs and improving patient care utilizing different models where radiologists can contribute value.

**Patient-Centered Care for Radiologists with Limited Face to Face Patient Interaction (Imaging 3.0)**

The American College of Radiology launched a campaign called Imaging 3.0™ in 2012 to drive a culture change throughout the specialty. Imaging 1.0 describes the emergence of radiology as a medical specialty, while Imaging 2.0 recognizes the spectacular technological advances of the last 20 years. Imaging 3.0 refers to a new era in which radiologists use improved communication and information technology tools to ensure that only appropriate imaging is performed, re-engage with their referring physician colleagues, and more than ever before, connect with their patients. Imaging 3.0 marries improved quality with reduced cost to deliver system-wide, patient-focused value. The first step, using consultative evidence-based clinical decision support such as ACR Select™, integrates and connects radiologists across institutions and settings at the beginning of the care process when imaging is being considered. The second step occurs when the interpretation is delivered in a standardized and structured actionable radiology report. Structured reporting allows for quantitative measurement of patient-specific value connected to actual outcomes, as well as the potential to offer decision support to assist radiologists in evidence-based imaging follow up and management. The third step is the ability for patients and referring physicians to have web-based access to imaging and reports. Imaging 3.0 rests firmly on an information technology platform that has been developed by radiologists in partnership with industry and proven in clinical practice to ensure widespread interoperability and adoption. Each of these steps along the imaging continuum enable radiologists to serve as wise stewards of resources.
Transforming Clinical Practice Initiative (R-SCAN)

The ACR is one of thirty-nine health care collaborative networks selected to participate in the Transforming Clinical Practice Initiative (TCPI). Radiology Support, Communication, and Alignment Network (R-SCAN) provides radiologists and referring clinicians with tools, information, and network support needed to improve quality of care, increase patients’ access to information, and spend health care dollars more wisely.

The R-SCAN program targets imaging exams highlighted in the widely embraced Choosing Wisely® campaign and aligns with the ACR Imaging 3.0 initiative in which radiologists help referring providers select the best imaging exam, help patients avoid unwarranted testing, reduce errors and improve quality and safety. As a Support and Alignment Network, the ACR will support at least 24,000 referring clinicians to expand their quality improvement capacity, learn from one another, and achieve common goals of improved care, better health, and reduced cost. R-SCAN will bring together radiologists, their referring physician colleagues, and patients in a collaboration to reduce unnecessary testing and procedures and to help participating clinicians meet the initiative’s phases of transformation and associated milestones, clinical and operational results.

Summarizing, wise use of resources is vitally important to radiology so we encourage use of actionable, meaningful measures for radiologists. We believe there are relevant, valid resource metrics for radiology but currently there is no way to attribute costs effectively, while addressing Medicare Part A and B costs.

While the ACR acknowledges that its members typically have limited direct “face to face” contact with patients, that is not to say that caring for patients is absent from radiologists’ service. Radiologists are equally committed to providing value and patient-centered care – it is at the core of Imaging 3.0. Radiologists and their teams empower and encourage their patients to ask questions, they seek to image gently and wisely, and to talk with referring clinicians about appropriate care for their patients. We recently created a Commission on Patient and Family Centered Care to support and expand upon our members’ patient-focused efforts.

Patient relationship codes

The MACRA requires that CMS develop classification codes to identify patient relationship categories, which stand to define the relationship of the physician with a patient at the time that a service is provided. In considering the patient relationship codes as proposed, would radiologists be excluded from the resource use determination when providing services with a relationship of “only when ordered”, (e.g. interpretation and reporting of a pelvic CT for a hip surgery patient)? Or would there be some accountability attributed to the radiologist for that resource use?

The dominant practice model for radiology today is such that radiologists have little control of utilization of imaging studies. Where radiologists do have some resource control, measuring the impact of that is in its infancy. Until initiatives such as Imaging 3.0 and R-SCAN take greater
hold and integration of tools such as clinical decision support are more widely in place, and until valid and reliable measures are available for evaluating good imaging stewardship, we propose in the first few years of MIPS that the patient relationship code for “only when ordered”, or by specialty designation, exempt radiologists from being measured in the resource use category. This would be comparable to the specialty based, five-year hardship exception in the Meaningful Use (MU) program.

As has been the case with MU, there is a subset of radiologists who are able to meet the MU requirements. Radiologists who have more direct, frequent contact with patients such as interventional, pediatric or breast imaging radiologists may wish to opt for measurement under resource use; or those who may choose optional methods for calculating resource use performance such as hospital outpatient Imaging Efficiency measures.

**Alternative Measures**

Section 101 of MACRA requires CMS, when developing and implementing resource use measures, to give consideration to physicians not typically seeing patients in face to face interactions. CMS asked in its September 2015 Request for Information on Implementation of MIPS what other measures could be used in the quality and resource use performance categories for these types of physicians. The ACR provided CMS with comments alternative measure use in response to the MIPS RFI, and would like to reiterate these comments in the context of the episode grouper questions.

Participation using alternative measures should be optional. Before having a hospital performance score attributed to a radiology group, an initial discovery/team-building period would be required with the hospital to understand how the radiology group could make positive change prior to selecting use of these alternative measures. Community practice radiologists would likely have a greater need for a discovery period than academic practice radiologists, such as those that are predominantly in ACOs. Likewise, hospital-employed radiologists would likely have built relationships that would facilitate a joint effort. Allowing use of hospital measures as an option would enable this discovery period.

For measuring use of resources, might CMS consider the role that a radiologist plays in imaging clinical decision support (CDS) and associated consultation with a referring provider as to the most appropriate imaging to utilize? Not only does this consultative service assist in stewarding of resources, it also promotes care coordination, and focuses on what is best for each patient. CDS can play a role in this way to measure resource use, rewarding the radiologist for informing the provider to not order an inappropriate study, thereby saving resources. The ACR is currently considering measure constructs of this nature. A transitional time period for exemption would offer the opportunity for maturation of these concepts as measures of contribution to control resource use as well as time to identify other valuable metrics that we believe can be developed to improve use of resources in the following areas in particular; and to identify benchmarks:

- Appropriate imaging recommendations for “incidentalomas” (over-diagnosis) (too many, too often)
• Use of prior images to avoid duplicative exams
• Imaging appropriateness (actionable when done as a team with referring physicians, e.g. appropriate use of CT for headache in concert with neurologists using a similar measure, or in a facility setting)

We also strongly urge CMS to consider the option of counting quality measures designated in the efficiency/cost domain to serve also as measures under the Resource Use category. Examples are: 1) mammography/lung cancer screening abnormal interpretation rate or 2) appropriate use measures such as the 2016 PQRS measures on appropriate follow up imaging recommendations for incidentally found abdominal and thyroid lesions.

**Episode Group - Relevant Services**

The ACR recommends that CMS consider ranking of appropriate services for relevant services within an episode group. It appears that relevant services, with associated diagnoses, may be combined within a group regardless of their appropriateness. For example, in the Parkinson’s grouper, CT cervical spine is included, likely based on claims data, but is it appropriate? Neck pain (cervicalgia) is included in the episode as a relevant diagnosis, but a waiting period absent “red flags” is recommended before imaging for neck or back pain. Trauma is not included as a relevant diagnosis for Parkinson’s. Does this indicate that many Parkinson’s patients receive unwarranted cervical spine CTs?

The structure of the relevant services in these episodes lacks a ranking system. For example, virtually all inpatient episodes for the elderly could include pneumonia, falls, pressure ulcers, etc., therefore, many imaging modalities could be placed into relevant services even if they have no relationship to the trigger codes. Resource use for services in the grouper may not necessarily be higher if inappropriate studies are performed, but the measure scores would be better. Appropriate resource utilization should be rated higher than inappropriate.

Perhaps this indicates the need for paired appropriate use measures similar to what CMS includes in current quality programs such as PQRS, but there are not such measures corresponding one to one to the episode groups. Or alternatively, perhaps a CDS-like system needs to be incorporated across the board.

Might it be better to have very narrow episodes including only what is absolutely necessary in terms of services and diagnoses? And associate that with a system that scores all other services and diagnoses not directly related. Back to the Parkinson’s example - cervical spine CT or MRI would not be included. If either are ordered, it raises the question, why? If it was for a preventable fall with neck injury occurring in the hospital setting, the responsible clinical team or treating physicians should get a poor score (on a yet to be formed scale), but the imaging would receive an appropriate and favorable CDS score (as CT cervical spine is indicated because of the trauma- if appropriate NEXUS score documents imaging is necessary). Wouldn't this be a more ideal system to study and grade resource use?
Feedback on Methodologies

Both methods are reasonably well documented on the CMS website, yet much of the logic rules are described generally and it may not be clear from the grouper descriptors exactly how these rules are applied as there are too many possibilities to summarize. To resolve questions as to how one episode sharing the same triggers and time parameters would have its cost predicted compared to another would require a detailed vignette specific to the claims and codes for the two patients being compared. In this sense, while the materials appear to be transparent, their actual application will be difficult to parse. The ACR believes it is important for the grouper itself to be widely available or more thoroughly documented for public use.

Comments specific to the Episode Groups listed in the CMS RFI Appendix B are provided as an appendix below.

The ACR looks forward to continued dialogue with CMS officials about these and other issues affecting radiology. If you have any questions or comments on this letter or any other issues please contact Pam Kassing at 800-227-5463 ext. 4544 or via email at pkassing@acr.org.

Respectfully Submitted,

Cynthia R. Moran
Executive Vice President

Cc: Amy Bassano, CMS
    Robert Anthony, CMS
    Geraldine McGinty, MD, Chair, Commission on Economics
    Ezequiel Silva, III, MD, Vice-Chair, Commission on Economics
    Jacqueline Bello, MD, Chair, Commission on Quality and Safety
    Pam Kassing, ACR
    Mythreyi Chatfield, ACR
    Judy Burleson, ACR
    Laura Pattie, ACR
    Angela Kim, ACR

Submit to: episodegroups@cms.hhs.gov
Comments on Appendix B Episode Groups

General comments: Suggest that ultrasound imaging guidance codes should not be included in many groups. Example: 76942 (u/s imaging guidance).

| Breast |

**Mastectomy for Breast Cancer – Method A**

**Appropriateness of the time periods used for look**
- To capture the initial diagnostic imaging 30 days look back may be too short, 90 days is likely better.
- To capture chemotherapy and/or radiation, a 90 day look forward is definitely too short.

**Conditions, diagnoses that should be included or removed**
- The listed condition/diagnoses codes seem appropriate, however there are probably many more codes associated with abnormal breast with ICD10

**Generalizable across the patient population**
- The breast mastectomy episode grouper is generalizable.

**Included services (CPT codes) appropriate**
- Update the breast ultrasound code (76641 and 76642).
- Add all the breast biopsy codes including the needle location codes.
- Should radiation therapy codes be added?
- Expand the drugs HCPCS codes.
- Unilateral breast MR code (77058) should be added.

**Associated conditions which may complicate the care of these patient**
- Diabetes or other comorbidities are always complicating factors for surgery.

**Suggested removal/addition of dx or services**
- No suggested removal.

| Cardiovascular |

**Acute Myocardial Infarction (AMI) without PCI/CABG Method A**
- Have concerns regarding medications.
- Concerned that only some drugs that are used routinely are listed.
- Conscious sedation drugs are not listed. eg. fentanyl, versed
- Local anesthetics for conscious sedation not listed.
- Foley catheter not listed.
- MRI contrast agent should be listed

**Aortic Aneurysm Procedure Method B**
- No use of MRI?
Thoracic Aortic Aneurysm Method A
- MRI without cardiac imaging: Should have heart included to allow assessment of Aortic valve function.
- MRI contrast agent should be listed.
- CTA not included. Should be included so that annulus measurements can be made for TAVI.
- Hydralazine is the only antihypertensive listed. Not clear why other antihypertensives are not listed.
- Medications used for conscious sedation for angiography e.g fentanyl, versed, morphine, dilaudid should be included.
- Travel allowance one way for specimen collection (p9604) This does not make sense as it is not included in other disease processes.
- Health and behavior intervention (96152) If this is listed here, one could justify listing it for all diagnoses.

Ischemic Heart Disease (IHD), Chronic Method A
- MRI (stress) not listed in the relevant services.

Percutaneous Cardiovascular Intervention (PCI) Method A
- Foley catheter should be included.
- Conscious sedation drugs should be included; morphine is listed, but dilaudid is not nor is fentanyl and versed.

Cerebrovascular

Ischemic Stroke Method A
- Should the trigger require 2 episodes instead of one, because stroke could be discarded as a diagnosis after initial evaluation and a second claim with the same diagnosis is more likely to ensure a patient has had an ischemic stroke.
- Will all of the ICD hemorrhagic stroke codes from the process?
- What happens to the episode of care and in the future bundled payments if the patient dies?
- Is SNF included in the episode of care?
- Should repeat strokes within 90 days be included in the same episode of care?
- Is it appropriate to include TIA's?
- Under the Summary tab, subcategories include "intracranial hemorrhagic or cerebral infarction" as well as "acute ischemic stroke with use of thrombolytic agent," may not be appropriate since these are really two different categories of stroke.
- The trigger codes are all occlusion/stenosis/thrombosis/embolism, which seems appropriate.
- Under Relevant Services tab, should MR perfusion be listed separately from MRI/MRA, as it is for CT perfusion?
- Should multiphasic CTA be listed, not just CTA (to assess collaterals/spot sign)?
- Should the Primary percutaneous transluminal mechanical thrombectomy line include the word "cerebral"?
- Should physical therapy re-evaluation be included?
- Should PT be covered for longer than 15 minutes?
- Under Relevant Diagnoses: Should Seizure be included?
- Under Sequelae, Should DVT be included?
- Should hemorrhagic transformation be included?

Gastrointestinal
### Gastrointestinal (GI) Hemorrhage Method B

- Difficult to evaluate without specific mention of radiographic procedures
- Under the Episode trigger tab, why are anal fissure/fistula [565] and abscess of anal/rectal regions [566] listed in the GI Hemorrhage, Upper section?
- For GI Hemorrhage, Lower section, why are angiodysplasia, internal hemorrhoids and malignancy listed?

### Cholecystitis Method A

- Why is chronic rather than acute cholecystitis the episode here? Chronic cholecystitis has a wide range of manifestations, and often goes untreated and without hospitalization unless cholecystectomy is planned. It also appears that many of the diagnoses and services here relate to acute cholecystitis. So, does this episode represent chronic cholecystitis with admission for cholecystectomy?
- Did not see a CPT code for service related to cholecystostomy, which might be necessary in such cases. Relevant diagnoses should include factors that might affect the severity of such episodes, which might include conditions including immunosuppression
- Did not see potential sequelae including gangrenous cholecystitis, although this might be included with other codes
- Many of the sequelae codes representing many other inflammatory conditions in the abdomen do not seem relevant, unless the intent is to include conditions that could potentially mimic the primary trigger code

#### Appropriateness of the time periods used for look
- Seem appropriate

#### Conditions, diagnoses that should be included or removed

- Assuming that acalculous cholecystitis would be included as a under Trigger code 5751 – ‘other disorders of gallbladder – other cholecystitis’. If not, then a code specific for acalculous cholecystitis should be considered
- Since the gallbladder is often blamed for sepsis in ICU patients, an ICD9 code of septicemia as a relevant diagnosis may be useful; however it looks like this is covered as one of the sequelae

#### Generalizable across the patient population
- Yes

#### Included services (CPT codes) appropriate

- Since gallbladder disease can be managed non-operatively in several circumstances, it seems that CPT codes for image-guided (both US and CT) cholecystostomy catheter placement are missing currently. Perhaps this is implied under CPT code 75980, but that one sounds like placement of a bile duct catheter rather than a GB drainage catheter
- While non-contrast MR is often useful, contrast-enhanced MR can play a role in evaluating cholecystitis (ie, evaluation of cholangitis, differentiating from GB cancer etc, evaluating for leak/perforation using Eovist in hepatobiliary phase etc) in some instances; contrast-enhanced MR should also appear as a code here
- Consider including chest radiography code, as many of these patients are managed surgically and chest radiograph is commonly ordered pre-operatively. There is a ICD9 code for this listed under the Relevant Diagnoses tab, but none under the Relevant Services tab

#### Associated conditions which may complicate the care of these patient
- Morbid obesity, chronic liver disease (ie cirrhosis)

#### Suggested removal/addition of dx or services

- Under the sequelae tab, unclear why any of the hemorrhoid, angiodysplasia, or diverticulosis codes are relevant to cholecystitis. Additionally, specific codes for septicemia due to plague and anthrax seem to be unnecessary due to their extreme rarity; maybe simplify by reducing the number of trigger codes for septicemia
**Clostridium difficile Colitis Method A**

- No imaging studies listed under relevant services. Many cases of C. Diff colitis are diagnosed by CT and CT (either without contrast or with contrast) may be used to evaluate the severity of the condition and complications
- Very long list of sequelae episodes, many of which did not seem very relevant, but did not see potential for abscess or fistula or need for colectomy and subsequent complications
- Did not see potential sequelae including gangrenous cholecystitis, although this might be included with other codes
- Wide range of risk factors such as immunosuppression and nosocomial origin and prior antibiotic therapy that need to be considered. Unsure how these would fit into this schema

**Appropriateness of the time periods used for look**
- Seem appropriate

**Conditions, diagnoses that should be included or removed**
- Consider adding hematochezia
- Consider removing encounter for palliative care, attention to gastrostomy, fitting/adjustment of vascular catheter
- Why not also include the following (as listed in the diverticulitis grouper)?
  - nonspecific (abnormal) findings on radiological and other examination of gastrointestinal tract
  - nonspecific (abnormal) findings on radiological and other examination of abdominal area, including retroperitoneum
  - other symptoms involving abdomen and pelvis
  - abdominal or pelvic swelling, mass, or lump, other specified site
  - personal history of unspecified digestive disease
  - personal history of other diseases of digestive system
  - long-term (current) use of steroids
  - leukemoid reaction

**Generalizable across the patient population**
- Although C. diff is more common in patients with advanced age, the episode seems to be generalizable overall

**Included services (CPT codes) appropriate**
- The literature has shown that MR has much utility for colorectal disease, including inflammatory conditions. This is especially true in younger patients when radiation dose must be considered. Therefore, consider advocating for addition of some MR CPT codes

**Associated conditions which may complicate the care of these patient**
- Patients on long-term antibiotics, those with known antibiotic resistance, or are immunosuppressed

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**Colonoscopy Method B**

- In the Major Outpatient tab, radiography (ie, r/o free air) and single-contrast enema are also commonly requested to evaluate post-procedural status. Perhaps they can also be coded as a post-procedural imaging choice in addition to CT
**Diverticulitis of Colon Method A**

- Under sequelae, the possibility of a fistula between the colon and an adjacent loop of colon or small bowel or an enteroovaginal fistula is not included.
- There are a number of conditions that might affect the outcome of an episode of diverticulitis. These would include inflammatory bowel disease (Crohn’s or Ulcerative colitis), diabetes, multiple types of malignancies and immunosuppression - either related to another condition or induced because of a transplant or other reason.
- At times colon cancer can be misdiagnosed as diverticulitis. It is not uncommon to do a partial colectomy, with or without colostomy and subsequent takedown of the colostomy and all of the potential sequelae.

**Appropriateness of the time periods used for look**

- Look back period for diverticulitis may be a bit short for some patients with early disease; for example, if a CT states that findings are ‘concerning for’ or ‘suggestive of’ diverticulitis, the trigger event may not occur until several days later. This is especially concerning for patients in the outpatient setting since the trigger rule explanation states, ‘Some episodes can be triggered without a hospitalization by the appropriate diagnosis codes on two physician claims at least 30-days apart’

**Conditions, diagnoses that should be included or removed**

- Under the trigger code tab, it’s unclear why ‘hemorrhage’ is specifically mentioned with diverticulitis in the trigger code description. It seems that it would be more useful to state: diverticulitis-uncomplicated vs. diverticulitis-complicated (common complications may include perforation, abscess, fistula, hemorrhage, etc)
- Suggest potentially adding the following to the relevant diagnoses tab: hematochezia, change in bowel habits, bloating
- Suggest removing elevated cancer antigen 125 and bilious emesis as I’m uncertain as to how they relate to diverticulitis

**Generalizable across the patient population**

- Yes

**Included services (CPT codes) appropriate**

- MR has much utility for colorectal disease, including evaluation of inflammatory diseases such as diverticulitis and its associated sequelae (abscess characterization and fistula detection/characterization. This is especially true in younger patients when radiation dose must be considered. Consider advocating for addition of some MR CPT codes
- Unclear if the episode group refers only to acute diverticulitis or also encompasses chronic diverticulitis. In some cases, acute or chronic diverticulitis may result in imaging findings that mimic or suggest colon cancer. In such cases, colonoscopy or virtual colonography (VC) may be indicated to further evaluate a segment of thickened, non-distensible colon. From an imaging standpoint, CPT codes for VC may be considered
- Code for fluoroscopic fistulogram may also be considered in diverticulitis patients. Why not include a code for chest radiography (similar to that listed in the C. diff grouper)? Chest radiography may be useful in diverticulitis patients in the pre-operative setting or those with persistent fever etc.

**Associated conditions which may complicate the care of these patient**

- History of prior pelvic surgery (ie, commonly hysterectomy, appendectomy, bowel surgery, prostate surgery etc) or known adhesions would complicate care and prevent or cause reluctance to perform surgery. Some potential unanticipated downstream effects may include the need for multiple percutaneous, image-guided procedures and more imaging follow-up since an often definitive treatment (ie, surgery) is a less viable option

**Suggested removal/addition of dx or services**

- In the Sequelae tab, it’s unclear why gallstone ileus, residual hemorrhoidal skin tags, other obstruction of duodenum, and any of the hemorrhoid trigger code descriptions are listed, as it doesn’t seem like they are an after effect or secondary result of care for this condition. Perhaps these can be removed to simplify the list

**Genitourinary**
Prostatectomy for Prostate Cancer Method A

Appropriateness of the time periods used for look

- Seem appropriate

Conditions, diagnoses that should be included or removed

- Regarding the relevant diagnoses tab, how are other pelvic tumors (ie, bladder, seminal vesicle, sarcomas) that secondarily invade the prostate coded for the patient who may benefit from prostatectomy?
- Why not have: 1) nonspecific (abnormal) findings on radiological and other examination of genitourinary tract or 2) nonspecific (abnormal) findings on radiological and other examination of abdominal area, including retroperitoneum, similar to what is already listed for diverticulitis? Example: a LIRADs 5 lesion found on prostate MRI

Generalizable across the patient population

- Yes

Included services (CPT codes) appropriate

- Due to potential for post-operative pelvic fluid collection/abscess, consideration should be given to list a CPT code for image-guided (US & CT) aspiration/catheter drainage placement. A code for fluoroscopic cystogram may be considered for use during the post-operative period

Associated conditions which may complicate the care of these patient

- Prior radiation therapy, some Crohn’s patients

Suggested removal/addition of dx or services

- Under the sequelae tab, there’s a trigger code for infected post-operative seroma and other post-operative infection, but none specifically for abscess. Should this be listed separately?

Metabolic

Osteoporosis Method A

Appropriateness of the time periods used for look

- Seem appropriate

Conditions, diagnoses that should be included or removed

- No additional recommendations

Generalizable across the patient population

- Inpatient versus outpatient will differ in this disease process. If admitted, it will usually be related to a fracture or pain management related to sequela.

Included services (CPT codes) appropriate

- Seem appropriate

Associated conditions which may complicate the care of these patient

- Will be very different whether the person presents with a complication related to the osteoporosis as opposed to just a diagnosis.

Suggested removal/addition of dx or services

- Vertebroplasty and kyphoplasty are not included under the irrelevant services. I am not sure if the frequency is enough to warrant their inclusion, but in our inpatient population this is considered a frequent option.

Musculoskeletal
Hip/Femur Fracture or Dislocation Treatment, Inpatient (IP)-Based Method A
Appropriateness of the time periods used for look
• Seem appropriate

Conditions, diagnoses that should be included or removed
• No additional recommendations

Generalizable across the patient population
• Almost all will be inpatient.

Included services (CPT codes) appropriate
• Seem appropriate

Suggested removal/addition of dx or services
• CPT 77080-77082 for Dexa scans. May be performed in cases of osteoporotic fractures

Hip Replacement or Repair  Method A and B
Appropriateness of the time periods used for look
• Seem appropriate

Conditions, diagnoses that should be included or removed
• Consider revising as independent from a primary procedure. Imaging work up is very different between the two.

Generalizable across the patient population
• Inpatient versus outpatient will differ in this disease process. If admitted, it will usually be related to an acute fracture and fall with the associated comorbidities.

Included services (CPT codes) appropriate
• For CPT 20610, arthrocentesis, consider if it is routinely done with fluoroscopic guidance.
• Might consider including CPT 77073, bone length studies. This is listed for the knees and would be occasionally used in these patients.

Are there associated conditions which may complicate the care?
• Again the indications for a hip revision inherently may lead to a more complicated hospital course, such as infection and revision as opposed to a primary procedure.

Suggested removal/addition of dx or services?
• None other than mentioned above.
Knee Arthroplasty (Replacement) Method A and B
Appropriateness of the time periods used for look back (ID Tab)
- Seems appropriate.

Conditions, diagnoses that should be included or removed
- A revision should be considered independently from a primary procedure. It appears here that they are lumping the two together. The imaging work up is very different between the two.

Is the episode group generalizable across the patient population?
- Inpatient versus outpatient will differ in this disease process. If admitted, it will usually be related to a fracture or pain management related to sequela.

Are the included services appropriate?
- Regarding CPT 20610, arthrocentesis - it is probably most frequently done without image guidance.

Are there associated conditions which may complicate the care?
- The indications for a knee revision inherently may lead to a more complicated hospital course, especially in the case of infection.

Suggested removal/addition of dx or services?
- None other than mentioned above.

Spinal Fusion Method A and B
Appropriateness of the time periods used for look back (ID Tab)
- Seems appropriate

Conditions, diagnoses that should be included or removed?
- Cases of infected hardware would be the real outliers.

Are there associated conditions which may complicate the care?
- Infection

Suggested removal/addition of dx or services?
- Consider adding CPT 62290 for discography. Though infrequent, it is occasionally done before lumbar spine surgery. Also may consider adding CPT codes for image guided facet injections as these are sometimes done as well to confirm the source of pain.

Respiratory

Pulmonary Embolism, Acute  Method A
- Pulmonary arteriography with pressure measurements should be listed. Only selective catheter placement is listed (36015)
- Conscious sedation drugs should be included
- Iodinated contrast for CT should be included

Upper Respiratory Infection, Acute, Simple  Method A
- Include chest x ray in the relevant services and perhaps chest CT
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