Concurrent and Overlapping Surgeries:

Additional Measures Warranted

December 5, 2016

A SENATE FINANCE COMMITTEE STAFF REPORT

I. BACKGROUND

The Senate Finance Committee (Committee) has jurisdiction over the Medicare and Medicaid programs and as part of its oversight of these programs has conducted numerous inquiries over the years to improve patient safety and transparency.[1] In December 2015, Committee staff became aware of a surgical practice—referred to by hospitals as "concurrent", "overlapping", or "simultaneous" surgeries—from a *Boston Globe* article.[2] Previously, the practice was not widely understood beyond the medical field. Regardless of the specific terminology used, the practice involves a surgeon scheduling and conducting operations on two different patients during the same period of time.

Alarmed by the allegations of patient harm, surgeon misconduct, and inappropriate billing highlighted in that article, the Committee launched an initial inquiry to better understand the practice and the frequency with which it occurs. In early 2016, the Committee sent a letter to 20 teaching hospitals querying them about the practice in their institutions. This letter generated strong interest from hospitals, individual physicians, patient advocates, and others who reached out to the Committee to share their experiences, insights, and knowledge about these issues. Additionally, Committee staff examined guidance issued by the Centers for Medicare & Medicaid Services (CMS), within the Department of Health and Human Services (HHS), and the American College of Surgeons (ACS), policies and other information provided to the Committee by hospitals and others in response to our letter, and other information gathered from stakeholders. This report is a summary of the Committee's staff's findings to date and an overview of key issues and areas of Congressional concern.

II. OVERVIEW

The *Boston Globe* article provided an in-depth review of concurrent surgeries being practiced at certain hospitals operating in the Boston area, alleging that the practice may have resulted in several instances of measurable patient harm, including deaths. Specifically, the article described operations in which surgeons divided their attentions between two operating rooms over several hours, failed to return to the operation when residents or fellows needed assistance, or failed to arrive on-time for surgeries, leaving residents or fellows to perform surgeries unsupervised or resulting in patients under anesthesia for prolonged periods. The article also noted that patients were not informed their surgeries would run concurrently with another, calling into question hospitals' patient consent processes. A number of patient advocates also raised concerns to the Committee that the primary motivation for a surgeon to conduct concurrent surgeries was financial, enriching surgeons at the expense of patient care.

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[1]See, for example, Senate Finance Committee. *Physician Owned Distributors (PODs): An Overview of Key Issues and Potential Areas for Congressional Oversight* (Washington, D.C.: June 2011).

[2]See Abelson J, Saltzman J, Kowalczyk L, Allen S. "Clash in the name of care." *Boston Globe*. October 25, 2015.

Advocates of concurrent surgeries argue that this longstanding practice enables timelier access to high-skilled, in-demand surgeons by freeing up their time to perform more specialized operations, helps train medical professionals by pairing senior doctors with residents or fellows, and improves the utilization of operating facilities. Additionally, some hospital officials said that their internal analyses found no differences in complication rates between concurrent and other surgeries. Indeed, the American Hospital Association reported to Committee staff that they are aware of only one study that presents research on the practice of concurrent surgeries.[3] In addition, queries to CMS, the HHS Office of Inspector General (OIG), the Agency for Healthcare Research and Quality (AHRQ), and The Joint Commission, as well as literature searches for data and research on this practice, resulted in little if any data or research on its frequency, cost-effectiveness, or impact on surgical outcomes and patient health. Although CMS has billing restrictions that pertain to this practice when it occurs at teaching hospitals, the agency indicated that it has not routinely monitored or audited teaching hospitals for conformance with those billing restrictions. Additionally, no CMS billing requirements exist when concurrent or overlapping surgeries occur outside a teaching setting.

In the absence of empirical data or research, when the Committee began its inquiry the hospital administrators, surgeons, and other healthcare professionals were largely skeptical of concerns regarding the safety of the practice of concurrent surgeries. Since that time, Committee staff observed a shift in attitudes among many organizations and recognizes the steps that hospitals and medical professions have taken in a relatively short timeframe to address many of those concerns. Nonetheless, the frequency and consequences of the practice of concurrent or overlapping surgeries remain unknown. Additionally, it is unclear how hospitals outside of the 20 the Committee contacted may change their policies and procedures to respond to recent professional guidance, such as that promulgated by the ACS.

III. GUIDANCE ON THE PRACTICE OF CONCURRENT AND OVERLAPPING SURGERIES

To be eligible for payment from Medicare or Medicaid, hospitals must comply with health and safety standards—known as the Medicare Conditions of Participation (COPs).[4] According to the American Hospital Association, all but a few hospitals elect to participate in Medicare and Medicaid because both federal programs account for over half of all care provided by hospitals.[5] To demonstrate that they have met the COPs or equivalent standards, hospitals may be certified by a state agency on behalf of CMS or accredited by a CMS-approved private organization, such as The Joint Commission.[6]

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[3]See Younk KM, Gillen JR, Kron IL, et al., "Attendings' Performing Simultaneous Operations in Academic Cardiothoracic Surgery Does Not Increase Operative Duration or Negatively Affect Patient Outcomes". Paper presented at the annual meeting of the American Association of Thoracic Surgery, April 28, 2014.

[4]See 42 C.F.R. § 482.1.

[5]American Hospital Association, "American Hospital Association: Underpayment by Medicare and Medicaid Fact Sheet."

[6]The Joint Commission accredits about 80 percent of the approximately 4,900 hospitals that receive Medicare or Medicaid payments. CMS also recognizes three other organizations as hospital accreditation organizations: Det Norske Veritas, the Accreditation Association for Hospitals and Health Systems, and the Center for Improvement in Health Care Quality. We did not review these organizations' hospital accreditation standards as part of our work.

Critical access hospitals (about 1,300) and ambulatory surgery centers (about 5,400) must also meet CMS requirements to receive payment from Medicare or Medicaid and be certified.

Notwithstanding CMS billing restrictions in this area, neither CMS's COPs nor CMS's interpretive guidelines, which describe the COPs and provide survey procedures used to determine compliance with them, mention the practice of concurrent or overlapping surgeries. However, the COPs do make requirements of hospitals in other related areas, such as by outlining acceptable standards for surgical services, defining the rights of patients in consenting to treatment, and explaining that surgical privileges should be granted commensurate with the competencies of individual practitioners.[7] Additionally, CMS's interpretive guidelines explain that surgical services—whether performed on an inpatient or outpatient basis—must be provided in accordance with acceptable practice, which includes Federal and state laws, and any standards established by nationally recognized professional associations, such as ACS.[8] This CMS guidance also indicates that in certain instances, the supervising surgeon must be present in the same room: "when practitioners whose scope of practice for conducting surgical procedures requires the direct supervision of an MD/DO [doctor of medicine or doctor of osteopathic medicine] surgeon, the term 'supervision' would mean the supervising MD/DO surgeon is present in the same room, working with the same patient."[9]

Similar to the COPs, The Joint Commission officials informed Committee staff that their hospital standards—which form the basis under which most hospitals meet CMS's accreditation requirements—do not make any specific references to concurrent or overlapping procedures, but their standards do set requirements related to the establishment of clinical bylaws, to include practices performed in operating rooms.[10] Additionally, Joint Commission standards require hospitals to design or improve processes using clinical practice guidelines, which Joint Commission officials told Committee staff would include practice guidance, such as that developed by ACS.[11]

In order to be eligible for payment under the Medicare Physician Fee Schedule, health care services must meet additional CMS requirements. For example, Section 100.1.2 of CMS's *Medicare Claims Processing Manual* explains the circumstances under which physician services provided in hospitals are paid when teaching physicians involve residents or fellows in the care of their patients, including the situations in which teaching physicians can bill Medicare for two overlapping surgeries.[12] The most notable billing requirements are as follows:

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[7]See 42 C.F.R. § 482.51, 482.13(b)(2), 482.51(a)(4).

[8]CMS, *State Operations Manual: Appendix A – Survey Protocol, Regulations and Interpretive Guidelines for Hospitals* (revised November 2015), Section A-0940.

[9]CMS, *State Operations Manual*, Section A-0945.

[10]For example, Joint Commission Accreditation Standard LD.04.01.07 is "The hospital has policies and procedures that guide and support patient care, treatment, and services."

[11]See Joint Commission Accreditation Standard LD.04.04.07.

[12]See CMS, *Medicare Claims Processing Manual: Chapter 12 – Physicians/Nonphysician Practitioners* (revised March 2016). Although this guidance does not explicitly define overlapping surgeries, it describes permitted and prohibited practices.

Although the *Medicare Claims Processing Manual* does not specifically mention fellows, CMS notified Committee staff that the reference to residents in the billing requirements includes fellows.

- The teaching physician must be physically present during all critical or key ("critical") portions of the procedure and be "immediately available" during the entire procedure.[13]
- The critical portions of two surgeries performed by the same teaching physician may not take place at the same time.
- If circumstances prevent the teaching physician from being immediately available during non-critical or non-key portions of the surgeries, then she/he must arrange for another qualified surgeon to be immediately available to assist with the procedure, if needed.

As noted above, these billing requirements apply to the treatment of Medicare beneficiaries in teaching hospitals only, which comprise about 1,000 of the approximately 4,900 hospitals in the U.S. that receive Medicare payments. These requirements do not apply to non-teaching hospitals, non-teaching procedures performed at teaching hospitals, or to surgeries performed on non-Medicare patients. In 2014, hospitals performed over 26 million surgeries—about 9 million inpatient surgeries and over 17 million outpatient surgeries.[14]

The stipulations from CMS's COPs and corresponding interpretative guidelines, as well as from CMS's *Medicare Claims Processing Manual* had formed the basis of what constituted appropriate practice under Medicare regarding concurrent and overlapping surgeries prior to the publication of the *Boston Globe* article. As the result of the recent increase in public awareness and scrutiny of the practice, ACS reviewed and then modified its guidance to surgeons in April 2016 to address the practice of concurrent and overlapping surgeries.[15]

According to ACS officials, their revised guidance, by design, does not depart greatly from CMS's billing guidance for teaching physicians. ACS officials told Committee staff that they determined that the CMS language, in general, clearly described what is and is not appropriate practice. ACS officials told Committee staff that the purpose of their revisions was to clarify appropriate practice by separately defining terminology and adding more specific wording in some areas. For example, ACS guidance defines "concurrent or simultaneous operations" ("concurrent") separately from "overlapping operations." ACS's definitions of concurrent and overlapping surgeries are paraphrased below, and we use these definitions going forward in this report to distinguish between the two types of surgical practices:

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[13]CMS's *Medicare Claims Processing Manual* defines the critical portion to be the part(s) of a service that the surgeon determines to be critical and states that critical does not generally include the opening or closing of the surgical field.

Immediately available is generally not defined, except to indicate that a surgeon performing another procedure would not be considered to be immediately available.

[14]See American Hospital Association, *Trendwatch Chartbook 2016: Trends Affecting Hospitals and Health Systems*.

[15]See American College of Surgeons, *Statements on Principles* (revised April 12, 2016).

In addition, several associations of neurosurgeons issued a joint position statement on the practice of concurrent and overlapping surgeries that largely mirrors the ACS guidance. See American Association of Neurological Services, American Board of Neurological Survey, Congress of Neurological Surgeons, and Society of Neurological Surgeons. "Position Statement on Intraoperative Responsibility of the Primary Neurosurgeon," July 20, 2016.

Concurrent or simultaneous surgeries: When the critical components of the operations for which the primary attending surgeon is responsible are occurring at the same time.[16]

Overlapping surgeries: When the critical components of the first operation have been completed and the primary attending surgeon performs critical portions of a second operation in another room.

ACS guidance is unequivocal about the practice of concurrent surgeries, stating "a primary attending surgeon's involvement in concurrent or simultaneous surgeries on two different patients in two different rooms is not appropriate."[17] In contrast, CMS's billing requirements are not intended to comment on the practice of concurrent surgeries from a health and safety standpoint—that is, those requirements were developed to identify appropriate and inappropriate billing practices.[18]

The ACS guidance describes two types of appropriate overlapping surgical scenarios that "should not negatively impact the seamless and timely flow of either" surgery. The key differences between the two scenarios (paraphrased from ACS guidance) are italicized below.

- **Overlapping operation, scenario 1[19]:** When the critical elements of the first operation have been completed *and there is no reasonable expectation that there will be a need for the primary attending surgeon to return to that operation*. In this scenario, the primary surgeon initiates the second operation.
- **Overlapping operation, scenario 2:** When the critical elements of the first operation have been completed and the primary attending surgeon is performing critical portions of a second operation in another room. *The primary surgeon must assign immediate availability in the first operating room to another attending surgeon.*

ACS officials told Committee staff that the first scenario describes a situation whereby the surgeon begins the noncritical portions of a second surgery—such as positioning, draping, or the opening incision—while a surgical intern or a technician closes the patient's wound in the first surgery.[20] In this situation, nothing would preclude the surgeon from leaving the second surgery to return to the first surgery, if needed. In contrast, under the second scenario, ACS officials told Committee staff that they contemplated that the

[16]ACS considers surgeries to be concurrent if the critical components of the two surgeries partially or fully overlap.

[17]ACS guidance does acknowledge that unanticipated circumstances may require the surgeon to leave the operation *before* the critical or key portion is complete. Unanticipated circumstances include sudden illness or injury to the surgeon, life-threatening emergency elsewhere in the operating suite or contiguous hospital building, or an emergency in the surgeon's family.

[18]CMS's *Medicare Claims Processing Manual* states that Medicare will not pay physician fees for overlapping surgeries performed by a teaching physician if that physician is not present for the critical or key portions of both surgeries and does not meet the other overlapping surgery requirements. While CMS's billing requirements generally do not refer to the practice of concurrent surgery, the requirements make it clear that CMS will not pay physician fees for concurrent surgeries, as they are defined by ACS.

[19]ACS guidance notes that the first scenario is the most common.

[20]ACS officials told Committee staff that under this scenario there is almost no possibility that the surgeon would be needed again and a similarly low likelihood that a surgical backup would be needed. Under this scenario, ACS guidance notes that a backup surgeon need only be assigned if the primary surgeon is not present or immediately available.

critical portion might occur very early after the start of the second surgery. This would mean that the surgeon would be unable to return to the first surgery if called upon. Thus, under the second scenario, ACS guidance specifies that the primary surgeon must assign immediate availability in the first operation to a backup surgeon.

In addition to separately defining concurrent and overlapping surgeries, ACS guidance goes beyond the CMS billing guidance in some additional areas. (See Appendix A for a comparison between Medicare and ACS guidance on the practices of concurrent and overlapping surgeries.) The ACS guidance:

- Defines "immediate availability" as reachable through a paging system or other electronic means and notes that each hospital should customize the definition.
- States that the patient should be told that the surgeon intends to conduct an overlapping operation. Additionally, patients should be informed after the operation if the surgeon had to leave due to an unexpected situation.
- Explains that it is reasonable in multidisciplinary operations—operations in which multiple attending surgeons from various disciplines work together on a single surgery—to expect a surgeon to only be present for the portion of the surgery requiring her/his expertise.

When queried, CMS officials did not indicate to Committee staff that they intend to modify the COPs in light of the revised ACS guidance, but noted that the COPs are broad, by design, to enable flexibility to accommodate changes in standards of practice, and noted that, as described above, CMS's COPs incorporate standards of acceptable practice, such as those established by nationally recognized professional associations.[21] However, because CMS's COPs state that surgical services must be provided in accordance with acceptable practice as established by nationally recognized professional associations, hospital administrators can and should determine if their practices are consistent with ACS's revised guidance on concurrent and overlapping surgeries. Officials with The Joint Commission told Committee staff that they expect the hospitals that they accredit to perform surgeries consistent with ACS's revised guidance on concurrent and overlapping surgeries. Beginning in the first quarter of 2017, The Joint Commission's surveyors will cite hospitals for deficiencies if, during the course of the conducting "tracers" on surgical patients,[22] surveyors determines that a concurrent surgery was performed by a hospital or if the hospital has no policy in place prohibiting such surgeries. Officials with The Joint Commission stated that they believe this approach will force hospitals to establish policies prohibiting concurrent surgeries.

IV. FEDERAL OVERSIGHT OF CONCURRENT AND OVERLAPPING SURGERIES

Compliance with the COPs or equivalent standards is assessed primarily through on-site surveys and through complaint investigations. Both CMS and Joint Commission told Committee staff that in conducting oversight activities, they have not noticed the practices of concurrent or overlapping surgeries as contributing in any particular way to patient harm. However, both also noted that the certification and

[21]CMS officials told Committee staff that CMS regulations do not specify exactly which organizations' guidelines hospitals should follow.

[22]As part of the survey, The Joint Commission's surveyors follow or "trace" the care provided to selected patients in the same order that the patient received care.

accreditation processes have not been designed to review those practices, specifically, and their survey findings are not collected in a way that would enable a retrospective review of this granular issue.

CMS officials also told Committee staff that they have never undertaken a study to determine whether the surgical procedures Medicare paid for met CMS's billing requirements specific to overlapping surgeries performed in teaching hospitals. Similarly, officials with AHRQ, the agency within HHS charged with researching how to improve health care quality and reduce medical errors, told Committee staff that the agency had not conducted any research related to concurrent or overlapping surgical practices.

Officials with HHS OIG also told Committee staff that they do not have any ongoing work specifically reviewing hospitals' adherence to the Medicare billing requirements for teaching physicians. However, officials did tell Committee staff that HHS OIG extensively audited billing practices at teaching hospitals in the past, and investigated allegations of whistleblowers related to such practices.[23] HHS OIG reported that 36 teaching hospitals settled False Claims Act or other similar cases related to these audits and investigations between 1995 and 2004.[24] More recently, in the last 12 years, HHS OIG officials informed Committee staff that there have been 9 additional settlements by teaching hospitals involving similar issues. Earlier this year, for example, the Department of Justice entered into a $2.5 million settlement with the University of Pittsburgh Medical Center (UPMC). While not directly related to concurrent or overlapping surgeries, the allegations included that some neurosurgeons submitted claims to Medicare without participating in or supervising surgeries to the extent required.[25] The fact that conformance with proper billing procedures at teaching hospitals, including supervision by teaching physicians, continues to be an issue raises concerns about the adequacy of controls in this area.

V. HOSPITAL POLICIES

Committee staff reviewed written responses to questions and hospital policies provided by the 20 teaching hospitals contacted in order to understand how those hospitals were interpreting and implementing the revised ACS guidance. When the Committee began its investigation, less than half of the 20 teaching hospitals contacted had institution-wide policies outlining the requirements for concurrent or overlapping surgeries, and not all of those stipulated that concurrent surgeries were prohibited. During the course of the investigation, in order to be consistent with the revised ACS guidance, 17 of the 20 hospitals we contacted modified existing or created new hospital-wide policies specific to concurrent and overlapping surgeries. The remaining three hospitals were in the process of drafting concurrent and overlapping policies and did not complete that process in time for inclusion in this report.

Sections A through F of this report describe the concurrent and overlapping surgical policies revised or developed by those 17 hospitals.[26] The concurrent and overlapping surgical policies among the 17

[23]HHS OIG conducted hospital audits—known as Physicians at Teaching Hospital (PATH) audits—which reviewed teaching physician compliance with Medicare billing rules. One area of focus for these audits was whether teaching physicians billing Medicare were present and provided sufficient direction to their residents who furnished the care, as required by CMS billing guidance.

[24]The multiple audits and investigations led to settlements between the Justice Department, HHS OIG, and teaching hospitals in excess of $225 million.

[25]See U.S. Department of Justice, "False Claims Act Violation by UPMC Resolved for $2.5 Million," July 27, 2016.

[26]Two of the 17 policies were drafts, still under review by the hospitals.

hospitals ranged in their thoroughness from those that were generally consistent with or even exceeded the revised ACS guidance to those that only partially conformed with the ACS guidance within the following six dimensions we reviewed:

- Defining concurrent and overlapping surgeries.
- Defining the critical portions of an overlapping surgery.
- Disclosing information to patients.
- Defining immediately available.
- Arranging for a backup surgeon.
- Ensuring compliance with the new policies.

A. Defining Prohibited and Permitted Practices

As of their recent policy updates, 15 of the 17 hospitals the Committee contacted now prohibit the practice of concurrent surgeries hospital-wide, generally absent an emergency or a multidisciplinary operation, and continue to permit overlapping surgeries.[27] Specifically, over half of these hospitals that updated their policies explicitly define concurrent surgeries and state that the practice is generally not appropriate, consistent with ACS guidance. The remaining hospitals did not explicitly prohibit concurrent surgeries (among those hospitals, some defined the practice and others did not.) However, these hospitals' policies do imply that concurrent surgeries are not permitted.

Among the 17 policies reviewed by Committee staff, about half either mirror the ACS definition of overlapping surgeries (under the first scenario) or use very similar language.[28] The remaining hospitals fall into one of two categories. The first category consists of hospitals that use a definition of overlapping surgeries that is close to the ACS definitions, except that these policies do not make it clear that the second surgery is to begin only after there is "no reasonable expectation" that the surgeon will need to return to the first operation.[29] The second category are hospitals that use definitions that are different than that of ACS—and these hospitals may also use different terminology to characterize what CMS and ACS call overlapping surgeries. For example, one hospital defines overlapping surgeries as "when an attending is operating in one room while supervising another." Another hospital defined overlapping procedures as "two procedures in which the surgical portions of the cases are not separate in time," and then also described two types of overlapping procedures. Yet another hospital informed Committee staff that it does not consider the practice of permitting surgeons to participate in a second case while the previous case is being closed—a practice they permit—to be overlapping surgery.[30] Regardless of the definition

[27]One hospital will grant surgeons permission to perform concurrent surgeries under two different exceptions, as follows: (a) for single-case situations, with the approval by the chief of service, associate chief nurse for perioperative services or designees, and the clinical director of anesthesia or designee; and (b) for a recurring operative scenario, with approval by the Operating Room Executive Committee, and re-approved every two years.

[28]Specifically, instead of "no reasonable expectation that there will be a need for the primary attending surgeon to return to that operation," some of these hospitals use the phrase "the primary surgeon…is not essential for the final phase of the first operation."

[29]Only half of these hospitals automatically assign immediate availability in the first operating room to another attending surgeon. Assigning immediate availability to another surgeon would be consistent with ACS's definition of overlapping surgery under the second scenario.

[30]According to CMS and ACS definitions, which we have applied to the analyses in this document, this example would be an overlapping surgery.

and terminology used by this second category of hospitals to describe overlapping surgeries, their policies explain that the critical portions of the first and second surgeries must not overlap.

Some hospitals' policies make additional stipulations on the practice of overlapping surgeries. For example, one hospital's policy notes that, upon request, departmental chairs will only permit surgeons to conduct overlapping surgeries after reviewing the surgeons' outcome and quality data. Another hospital's policy notes that when performing overlapping surgeries, the second surgery may not progress beyond anesthesia and other preparatory activities until the critical portion of the first case has been completed.

B. Defining the Critical Portions of an Overlapping Surgery

Although defined slightly differently, both CMS and ACS guidance permit each surgeon to determine which portions are critical. This position is intended to recognize both the expertise of the individual surgeon in making such a determination and that the critical portions can vary based upon the expertise of the residents, fellows, or technicians assisting in the operation or by the condition of the patient. CMS and ACS guidance do state that the opening and closing of the surgical site is generally not critical and ACS guidance goes farther by noting that the critical portions are those in which the essential technical expertise and surgical judgement of the surgeon is required to achieve *an optimal patient outcome*.

Among the 17 hospital policies reviewed, about a quarter of hospitals did not define the critical portion(s) of the surgery at all in their concurrent and overlapping surgical policies. The remaining hospitals are taking one of two general approaches. In about half of the hospitals, the determination of the critical portions of a procedure is left to the attending surgeon, consistent with CMS's billing requirements and ACS guidance. One hospital system questioned the need for further regulation or guidance on the definition of the critical portions for various reasons, including that "a static definition of key or critical would be impracticable in a practice environment that is continuously evolving with the advent of new technologies and procedures." The remaining hospitals have developed, or expect to develop, lists of procedures, generally by surgical department, of the critical components, most of which also identify the procedures and patient conditions where overlapping surgical procedures are not appropriate. The responsibility for developing and monitoring these lists falls to the hospital department chairs. For example, one hospital identified the critical portions of over 1,000 Current Procedural Terminology (CPT®) codes. Specifically, the hospital determined that for the following hip procedures the critical portions are finalizing bone cuts or bone preparation, implant trialing, and final placement of implants. (See Figure 1 below.)

Figure 1. Critical Portions of Hip Procedures, as Defined by One Hospital, 2016

SUB-HEADING 1	PRIMARY CPT	PROCEDURE NAME	CRITICAL PORTIONS
Repair, Revision, and/or Reconstruction	27125	HEMIARTHROPLASTY REPLACE JOINT PARTIAL HIP	Finalizing bone cuts / bone preparation, implant trialing and final placement of implants
Repair, Revision, and/or Reconstruction	27130	ARTHROPLASTY ACETABULAR AND PROX FEM PROSTH TOTAL HIP ANTERIOR APPROACH W/W/O AUTOGRAFT	Finalizing bone cuts / bone preparation, implant trialing and final placement of implants
Repair, Revision, and/or Reconstruction	27132	ARTHROPLASTY TOTAL HIP CONVERSION AFTER PREVIOUS HIP SURG	Finalizing bone cuts / bone preparation, implant trialing and final placement of implants
Repair, Revision, and/or Reconstruction	27134	REVISION JOINT TOTAL HIP BOTH COMPONENTS	Finalizing bone cuts / bone preparation, implant trialing and final placement of implants
Repair, Revision, and/or Reconstruction	27137	REVISION JOINT TOTAL HIP ACETABULAR COMPONENT ONLY	Finalizing bone cuts / bone preparation, implant trialing and final placement of implants
Repair, Revision, and/or Reconstruction	27138	REVISION JOINT TOTAL HIP FEMORAL COMPONENT ONLY	Finalizing bone cuts / bone preparation, implant trialing and final placement of implants

Additionally, some hospital policies identify the preoperative huddle or surgical "time out" to be a critical portion of the surgery or require surgeons to discuss the critical portions of the surgery with surgical staff and write a list of those portions on a white board in the operating room.

Some patient advocates have identified other criteria that should be used to define the critical components. For example, some organizations have stated that any work on the target organ should be designated as critical. Others believe that any work undertaken beneath the subcutaneous tissues—that is, the innermost layer of the skin—should be designated as critical. Other more extreme positions include that the entire surgery should be considered critical. Specifically, some contend that CMS should only reimburse for surgeries in which the surgeon is present in the operating room from the time the surgery is initiated until the final closure is completed. Committee staff recognizes that these additional approaches are not exhaustive and that other practices should be considered and examined. However, Committee staff finds merit in the approach whereby, to the extent practicable, surgical departments with a hospital's medical staff develop guidelines that identify the critical components of particular procedures while accounting for the individualized clinical judgment the surgeon must bring to each case. This approach seems to strike an appropriate balance by recognizing potential differences between and within hospitals and surgical departments but also by establishing and communicating common practices or norms for all surgeons within a hospital. As hospitals continue to refine their concurrent and overlapping surgical policies, they should determine whether to undertake similar efforts to define the critical portions of surgeries as an institution.

C. DISCLOSING INFORMATION TO PATIENTS

CMS's COPs and corresponding interpretive guidelines, while not specific to concurrent or overlapping operations, require hospitals to take certain steps to ensure that patients consent to planned surgeries. For example, this guidance states that a well-designed informed consent policy should include a discussion of a surgeon's possible absence during part of the patient's surgery, during which residents will perform surgical tasks, and that the informed consent policy should assure the patient's right to refuse treatment. ACS guidance includes similar requirements and goes further by stating that prior to the surgery, patients should be informed—through a discussion—that her/his surgery will be an overlapping one.[31] ACS officials told Committee staff that informed consent discussions should convey enough information to enable the patient to make a decision on the appropriateness of an action affecting her/his well-being, including information that might cause the patient to change her/his mind about an overlapping surgery.

Committee staff reviewed hospitals' overlapping surgical polices to understand the direction hospitals are providing surgeons, if any, regarding the informed consent discussions they should have with patients. Seven of the 17 policies Committee staff reviewed require surgeons to inform patients that the surgery is scheduled as an overlapping one, consistent with ACS guidance. In contrast, an equal number of the remaining hospitals only require that the patient be informed that her/his surgery *might* be an overlapping one. The remaining hospitals have what Committee staff considers to be overly vague patient consent procedures, as described in their overlapping surgical policies. Specifically, while two hospital's policies are consistent with preexisting CMS guidance in that they stipulate that prior to the surgery the surgeon should discuss with the patient her/his involvement in the surgery as well as the involvement of other medical providers, the hospitals' policies do not clearly state that the surgeon is expected to explain that she/he will be conducting overlapping surgeries. Thus, these policies are not consistent with the revised

[31]Additionally, if the surgeon had to leave the room unexpectedly during the operation or procedure, ACS guidance recommends that the patient be informed of that fact after the surgery.

ACS guidance. The third hospital's policy does not instruct the surgeon to explain that she/he will be conducting overlapping surgeries; it only requires the surgeon to inform the patient that a resident will participate in the procedure.

The majority of the hospital policies make it clear that patient consent involves a discussion about overlapping surgeries in addition to any explanations that may be provided to the patient in writing.[32]

Although most hospital policies require staff to inform patients that the surgery either is or may be an overlapping one, we also note that our review of hospital policies cannot provide a sense of how well-informed patients will be after hospital staff explain that the surgeon will be operating on another patient during the same time period. The author of an opinion piece in *Health Affairs* notes that American physicians and their medical teams inadequately inform patients and thus do not always enable patients to provide truly informed consent. Accordingly, the author warns that that discussions between surgeons and patients about overlapping surgeries will involve "euphemisms, incomplete information, and oblique discussions."[33]

Committee staff also reviewed 14 of the 17 hospitals' patient consent forms to see what type of disclosures are made to patients in writing.[34] Staff found that only three patient consent forms explicitly state that the surgery to which the patient is consenting is scheduled to overlap with another surgery and another hospital's form notifies the patient that she/he will be informed if the surgeon is scheduled for surgery in two operating rooms at the same time. One example of particularly thorough and explicit language from a patient consent form, which is only signed when applicable, is as follows:

> *My surgeon has informed me that my surgery is scheduled to overlap with another procedure she/he is scheduled to perform. I understand that this means my surgeon will be present in the operating room during the critical parts of my surgery but may not be present for my entire surgery. My surgeon has also informed me that she/he will supervise a surgical team which may include another attending surgeon, a surgery fellow and surgery residents and that some members of the surgical team will perform parts of my surgery. I understand that my surgeon or another qualified surgeon will be immediately available should the need arise during my surgery. My surgeon has answered all my questions about overlapping surgery and I give my consent.*

Other forms contained language that Committee staff believes to be too vague to truly inform patients about overlapping surgeries. Specifically, four hospitals inform the patient in writing that the surgeon *may* be involved in another procedure that overlaps.[35] In addition, another six hospitals' patient consent forms merely state that other healthcare providers may perform portions of the patient's surgery without

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[32]A small number of hospitals require that patients' medical records document that the discussion occurred.

[33]Rickert, James. "A Patient-Centered Solution to Simultaneous Surgery," Health Affairs Blog, June 14, 2016.

[34]Three of the 17 hospitals that updated their concurrent and overlapping surgery policies did not provide the Committee with copies of their patient consent forms.

[35]In each of these examples, the patient is notified that the surgeon will be present for the critical portions and may not be physically present during other portions, but each form describes the extent of the surgeon's activities when not present differently. For example, two forms state that the surgeon may be "involved in another procedure," the third states that the surgeon may be "coordinating additional procedures or patient care," and the fourth does not explain what the surgeon will be doing when not present.

mentioning that surgeon will not be present during those times, two of which also note that that the surgeon will be present for the critical portions. Among these six hospitals, half have overlapping surgical policies that require surgeons to inform patients that the surgery is scheduled or may be scheduled as an overlapping one. Officials with one of these hospitals explained that they chose not to revise their patient consent form, which is used to document consent for all surgeries, because only about one percent of surgeries performed in the hospital overlap. Instead, they modified their overlapping surgical policy to require surgeons to explain to patients that they plan to leave the operating room after completion of the critical portions and require surgeons to document in the medical record that such a discussion occurred.

Another concern expressed in the *Health Affairs* opinion piece is that the ACS guidance does not go far enough in terms of recommending when hospital staff inform patients and their families that the surgery will be overlap with another surgery.[36] Specifically, the author asserts that this information should be communicated sufficiently in advance so as to enable the patient time to consider her/his options. That is, notifying the patient immediately prior to the surgery, for example, after the patient and family members have already made necessary arrangements and arrived for the surgery, is not enough notice. One patient safety organization believes that surgeons should be required to obtain written consent from patients at least 24 hours prior to the start of an elective surgery. Four hospitals have overlapping surgical policies that may address this concern of sufficient time being provided to patients to consent to an overlapping surgery.[37] One hospital policy notes that "informed consent shall be obtained sufficiently prior to the proposed procedure to give the patient time to deliberate" (but does not define "sufficiently prior.") Another hospital policy specifically notes that the discussion should occur before the day of the surgery.

After reviewing the overlapping surgical policies, patient consent forms, and other materials some hospitals provided, Committee staff believes hospitals should consider taking the following actions, which could result in a more complete understanding by patients that their surgeons will be performing other surgeries in order for patients to provide informed consent.

- Develop overlapping surgical policies that require surgeons to inform patients sufficiently in advance that the surgery will be an overlapping one.
- Develop patient consent forms that clearly indicate that the surgeon has informed the patient that her/his surgery will overlap with another surgery and describe what that entails.
- Develop patient consent forms that require patients to explicitly consent to the overlapping surgery by, for example, requiring the patient to initial a specific location on the consent form or using a separate consent form for overlapping surgeries.
- Develop educational materials for patients and their family members which could provide additional sources of information to help inform patients' decisions to accept or reject the planned overlapping surgery.

The patient consent process should result in the patient understanding, before the date of the surgery, that her/his surgeon will also be performing a surgery on another patient in another operating room, and that during that time, residents or other medical professionals will perform portions of the patient's surgery.

[36]Rickert, James. "A Patient-Centered Solution to Simultaneous Surgery," Health Affairs Blog, June 14, 2016.

[37]Other hospital policies could also address this concern. For example, one hospital's operating room scheduling and utilization guidelines notes that the surgical team is responsible for completing the perioperative record, which includes the surgical consent form, prior to the day of surgery.

D. DEFINING IMMEDIATELY AVAILABLE

Both CMS's billing requirements and ACS guidance generally indicate that when the teaching surgeon or primary surgeon, respectively, is not present in the operating room, she/he should be immediately available to return to the operation, if needed.[38] While the CMS and ACS guidance set "immediate availability" as the standard that a surgeon should follow if she/he leaves the operating room, neither organization is very specific on what that should mean. The *Boston Globe* article cited incidences in which that standard was liberally interpreted, resulting in long periods of time between when the surgeon was contacted and actually returned to the operating room. Specifically, CMS's billing requirements do not generally define "immediate availability" except to indicate that a surgeon performing another procedure would not be considered to be immediately available.[39] It is worth noting that CMS's COPs and interpretive guidelines set a more stringent expectation with respect to "immediately available" for other health care professionals in hospitals. For example, an anesthesiologist supervising a certified registered nurse anesthetist is immediately available if she/he is in the same operative suite and the supervising registered nurse performing circulating duties in the operating room is immediately available if inside the operating suite. It is unclear why there is a less definitive standard for surgeons overseeing care provided by residents and fellows. The ACS guidance has gone further than the CMS billing requirements by defining immediately available as "reachable through a paging system or other electronic means, and able to return immediately to the operating room," and suggesting that each hospital personalize this definition.

Among the 17 hospital policies reviewed, about a third define immediately available as being on-campus, which for large campuses could result in substantial time before the surgeon returns to the operating room. Additionally, one hospital specified that the surgeon must be in the perioperative suite and others specified that the surgeon must be available within 5 or 15 minutes. Three hospitals did not define immediately available in their policies. In contrast, another hospital included this statement in its description of immediately available, which Committee staff feels is emblematic of the approach that should be used throughout the practice of overlapping surgeries stating, "conservative judgment should always be used."

E. ARRANGING FOR A BACKUP SURGEON

CMS billing requirements and ACS guidance essentially state that if the primary surgeon is not immediately available to assist when needed, the surgeon must designate a backup surgeon. In addition, under ACS's second definition of overlapping surgeries, the surgeon relinquishes their responsibility for being immediately available to an assigned backup surgeon once she/he begins the second operation.

Among the hospitals that had recently reviewed or updated their surgical policies, more than half require the primary attending surgeon to designate a backup surgeon if overlapping surgeries are scheduled. However, the policies of other hospitals were more vague, only requiring the primary attending surgeon to designate a backup surgeon *should the need arise*; for example, if the primary attending surgeon is not

[38]One exception is found in ACS guidance, if the hospital adopts ACS's second definition of an overlapping operation. In this scenario, ACS guidance indicates that the surgeon must assign immediate availability in the first operation to a backup surgeon once the primary surgeon starts the second surgery.

[39]CMS's *Medicare Claims Processing Manual* does state that if the teaching physician is participating in another procedure, she/he must "arrange for another qualified surgeon to immediately assist the resident in the other case should the need arise."

immediately available to return to the operating room.[40] This latter approach seems insufficient—the time to locate a qualified backup surgeon is not during an emergency requiring the immediate assistance of a surgeon.

Some hospitals also set additional expectations on the backup surgeon, for example, being credentialed to perform the procedure, available from the first incision until the wound is closed, willingness to be the backup, and awareness of the responsibility. Additionally, some policies make it clear that surgical fellows are considered to have the qualifications to serve as the backup surgeon. ASC officials told Committee staff that it would be appropriate for some fellows, with appropriate training, to function as the backup surgeon. Additionally, some hospital policies noted that the name of the backup surgeon should be communicated to the operating room staff, such as verbally during the time out, written on a white board in the operating room, or documented in the patient's medical record, and note that anyone on the surgical team may call the backup surgeon in to the surgery.

F. Ensuring Compliance with Policy

Consistent with CMS's COPs, well-crafted hospital policies should have robust compliance procedures to guarantee adherence to the policies, and thereby achieve desired outcomes. Ensuring adherence to patient safety practices can be a significant challenge.[41] To understand how hospitals intend to oversee surgeons performing these overlapping procedures, the Committee asked hospitals questions about the policies in place to monitor the surgeon's presence during the operation, ensure compliance with the policies, and address complaints. In addition, Committee staff reviewed the hospitals' policies to see how their plans are reflected in their guidance to staff.

Monitoring Surgeon Location and Tracking Critical Portions

CMS's *Medicare Claims Processing Manual* contains one related requirement for teaching physicians. Specifically, the surgeon must document in the medical record that she/he was physically present during the critical portions of the surgery.[42] Over half of the responding hospitals' policies mirrored the CMS billing requirements by requiring through their concurrent and overlapping surgical policies that surgeons attest—often in the medical record or operative report—that they were physically present for all critical portions of a procedure. Some hospital policies included more robust requirements, such as the following, often in addition to the CMS requirement.[43]

- Medical record or notes should document the following:
    - that the surgeon was immediately available for the entirety of the case;
    - the portion of the procedure performed by the backup surgeon, if applicable;

[40]Additionally, one hospitals' policy made no mention of backup surgical arrangements.

[41]In a recent Government Accountability Office report, hospitals identified key challenges in implementing patient safety practices. One of the key challenges identified was ensuring that hospital staff consistently implement the patient safety practices over time. See GAO, *Patient Safety: Hospitals Face Challenges Implementing Evidence-Based Practices*, GAO-16-308 (Washington, D.C.: February 2016).

[42]ACS guidance does not address how to help ensure compliance with concurrent and overlapping surgical policies.

[43]Some hospitals also sent the Committee copies of policies specific to teaching physicians and those policies in some cases specified additional requirements, for example, requiring the surgeon to document the critical portions of the surgery that they performed.

    - the name of all staff who participated in the surgery or were present in the operating room; and/or
    - surgical times—such as the start and end of the procedure—including the times staff enter and exit the operating room.[44]
- During the time out, the surgeon should inform the operating team as to their availability for the entirety of the case.

The Massachusetts' Board of Registration in Medicine, which promulgates rules that physicians licensed to practice in the state of Massachusetts must adhere to, is considering revising its regulations to require that patients' medical records reflect any absence of the surgeon from an operation. Specifically, the regulations would require the medical record to contain the time of any absences as well as the name of the backup surgeon responsible during the period of absence. ACS officials told Committee staff they were unaware of any other states considering similar requirements.

Ensuring Compliance

Many of the responding hospitals told Committee staff that failures to adhere to the concurrent and overlapping surgical requirements would be treated similarly to any other violations of policy, through existing corrective action or disciplinary procedures. However, several hospitals also included specific language in their concurrent and overlapping policies that describe how the hospitals intend to ensure compliance and describe the consequences of noncompliance. For example, some hospitals included the following type of language in their overlapping policies.

- Hospitals will conduct quarterly or random audits of adherence to the overlapping policy and/or of the performance of surgeons performing overlapping operations.
- Hospitals will conduct audits or monitor reports of overlapping surgeries to ensure compliance with CMS's billing requirements for teaching physicians.
- Staff should report observed violations of the overlapping surgical policy.
- Violations of the overlapping surgical policies may result in a loss of a surgeon's overlapping surgical privileges.

Additionally, some hospitals' concurrent and overlapping policies include language describing the roles that staff have in helping to assure compliance with policy. These include the following:

- Anesthesiologists may reschedule, delay, or cancel surgical cases in order to ensure policy compliance and appropriate behavior.
- Fellows, residents, or qualified assistants may initiate a procedure only if the surgeon is present within the hospital and not involved in the key portions of another surgery.

Developing policies to address the practice of overlapping surgeries is an important first step in helping to ensure that overlapping surgeries are safe; however, staff training to ensure that they understand the policies and oversight of those policies are equally important. Committee staff is encouraged that about a

[44]However, it was unclear whether this information is tracked each time staff leave and reenter the operating room or just tracked for the initial and final entry times. The capabilities of hospitals vary in this regard.

third of the hospitals contacted have plans to conduct audits to help ensure staff compliance with policies, thus lessening the potential of patient harm that could result from overlapping surgeries. In addition, we are encouraged by other steps hospitals have taken, such as empowering anesthesiologists to cancel surgeries if appropriate practice is not followed. Committee staff believes that all hospitals should consider undertaking similar activities to ensure compliance, and look forward to learning more about other approaches that hospitals are taking to oversee adherence overlapping surgical guidance.

Additionally, Committee staff feels that there are some areas that hospitals should pay particular attention to as part of their oversight activities. Although hospital policies may generally prohibit concurrent surgeries except in emergency situations, hospitals should monitor the frequency with which concurrent surgeries continue to occur to determine if the exceptions permitting the practice were warranted, safe, and unavoidable.[45] In hospitals with policies that enable surgeons to be granted permission to perform concurrent surgeries under other exceptions, those permissions should be closely monitored; Committee staff believes that it is inappropriate for exceptions to become the norm.

Handling Complaints

The Committee asked hospitals how they managed complaints about surgeries, specifically concurrent surgeries. Hospitals noted the policies and procedures they have already established to handle complaints from both employees and patients. These practices included anonymous compliance reporting phone lines and websites, policies to manage concerns raised by staff to supervisors, and policies to create an atmosphere encouraging staff to speak up when they have concerns. Committee staff believes that these and other practices, if properly implemented, should also result in the appropriate escalation of concerns about concurrent or overlapping surgeries to the right hospital officials.

VI. EXTENT OF THE PRACTICE

Over 26 million surgeries were performed by hospitals in 2014. However, there is little empirical information about the extent of the practice of concurrent or overlapping surgeries. The Committee requested data from the 20 teaching hospitals and obtained in response a limited amount of information upon which to draw conclusions.

- Among those hospitals that reported estimates of the percentage of overlapping surgeries performed from January 2015 through March 2016 hospital-wide, those percentages ranged from less than 1 percent to 33 percent of all surgeries.[46]
- Among the hospitals that also reported estimates of the percentage of overlapping surgeries performed by just those surgeons that perform overlapping surgeries, the percentages were higher than the hospital-wide percentages. For example, data from one hospital shows that 9 percent of all surgeries were overlapping ones but among the subset of surgeons that performed overlapping surgeries 46 percent of surgeries were overlapping ones.
- Among the hospitals that reported estimates of the percentage of overlapping surgeries by operating room, we did observe variation. On an operating room basis, the percentage of overlapping surgeries at one hospital ranged from 0 percent to 25 percent, and at least 20 percent

[45]ACS guidance generally defines an "emergency" as the sudden illness or injury to the surgeon, life-threatening emergency elsewhere in the operating suite or contiguous hospital building, or an emergency in the surgeon's family.

[46]Note that most hospitals noted that their estimates are of surgeries that had some period of overlap with another surgery, and do not necessarily identify concurrent surgeries.

of surgeries in each of 4 of 13 operating rooms were overlapping ones, accounting for 84 percent of overlapping surgeries hospital-wide.

- Among the hospitals that had processes to authorize surgeons to schedule surgeries in two operating rooms at the same time, a fraction of surgeons were so authorized.

Given the very limited size of the sample, the differences in the information reported by hospitals, and the broad range of reported frequency of overlapping surgeries, the information we received to date or found from outside sources does not provide Committee staff with an adequate understanding about the scope of the issue.

VII. COMMITTEE CONCERNS

Concerns over concurrent and overlapping surgeries have only recently come to the attention of hospitals and much of the public. The first large-scale discussion of the issue began in late 2015 and ACS issued its guidance in April 2016. The Committee staff commends the steps that some hospitals and surgeons have taken in a relatively short timeframe to address many of the concerns surrounding concurrent and overlapping surgeries. All 20 of the teaching hospitals contacted by the Committee modified their existing policies or created new hospital-wide policies specific to concurrent and overlapping surgeries, or were in the process of doing so. Furthermore, all 17 of the hospitals that recently revised their policies now have specific policies that generally prohibit concurrent surgeries and enumerate the circumstances under which their surgeons may perform overlapping surgeries. However, the Committee staff analyzed only a small portion of the policies from the nation's approximately 4,900 hospitals, of which approximately 1,000 are teaching hospitals, and those policies reviewed ranged in their thoroughness. Furthermore, Committee staff notes that concerns surrounding concurrent and overlapping surgeries are not limited to teaching hospitals, and apply to other settings that perform operations such as non-teaching hospitals and ambulatory surgery centers, though the number of overlapping surgeries performed in those setting may be much lower than those performed in teaching hospitals.[47] Thus, the Committee staff continues to have concerns in the following areas:

1. **Patient safety**. With respect to patient safety, while evidence on the practice—safe or otherwise—of concurrent or overlapping surgeries is lacking, the absence of data does not mean that there is no risk and the need to ensure patient safety and informed consent, as acknowledged by the ACS, is too important to ignore. With the revised ACS guidance, hospitals and the various oversight bodies have an opportunity to strengthen their policies surrounding the practice of concurrent and overlapping surgeries. ACS guidance provides a good starting point and the Committee staff would encourage hospitals and other health care institutions that perform surgeries and accept Medicare and Medicaid payments to take the following steps:
    a. Develop a concurrent and overlapping surgical policy that clearly prohibits the former and regulates the practice of the latter consistent with the ACS guidance.
    b. Formally identify the critical portions of particular procedures, to the extent practicable, as well as those portions unsuitable for overlap.
    c. Develop processes to ensure that patient consent discussions result in a complete understanding by the patient that her/his surgery will overlap with another patient's; develop materials such as frequently asked questions; and educate their patients ahead of

[47]Committee staff was unable to locate any data quantifying the extent to which concurrent or overlapping surgery occur outside of teaching hospitals.

their surgeries, giving them enough time to review materials and fully consider their options.

d. Prospectively identify the backup surgeon when overlapping surgeries are scheduled.
e. Develop mechanisms to enforce the established concurrent and overlapping surgical policies and monitor and enforce their outcomes.

In addition, CMS should modify its regulations or survey processes and direct the accrediting organizations to modify their hospital standards or survey processes to ensure that hospitals' eligible for payment from Medicare or Medicaid have policies that are consistent with ACS's revised guidance on concurrent and overlapping surgeries.

2. **Improper payments.** The Committee staff has two concerns with respect to the billing of concurrent and overlapping surgeries. First, CMS has not taken any steps to determine whether the existing billing requirements applicable to teaching physicians in hospitals are or are not being followed despite a history of problems in this area. Second, CMS's billing requirements are applicable only to teaching physicians operating in hospitals. There are no billing requirements in place that would prevent a surgeon from billing for two or more concurrent surgeries in hospitals outside of a teaching scenario, such as when a physician is assisted by a technician, or in non-hospital settings, such as in ambulatory surgery centers. As a result, the Committee staff recommends that:
    a. The HHS OIG should undertake an evaluation to review the controls in place to ensure that hospitals and physicians are appropriately billing for physician services provided by teaching physicians.
    b. The Administrator of CMS should review the agency's billing requirements for services performed by teaching physicians to determine if those requirements should be established for other surgical facilities and scenarios.

VIII. APPENDIX A

Comparison of Centers for Medicare & Medicaid Services (CMS) and American College of Surgeons (ACS) Guidance on the Practice of Concurrent and Overlapping Surgeries

	CMS's Medicare Guidance[a]	ACS's Guidance
Personal responsibility	Teaching physician is responsible for the preoperative, operative, and postoperative care of the beneficiary.	Primary attending surgeon is personally responsible for the orchestration and progress of a procedure as well as the patient's welfare throughout the operation. In general, the primary attending surgeon should be in the operating suite or be immediately available for the entire surgical procedure. There are instances consistent with good patient care that are valid exceptions.
Concurrent surgeries not permitted[b]	The critical or key portions of two surgeries performed by the same teaching physician may not take place at the same time. (The teaching physician may become involved in a second procedure when all of the key portions of the initial procedure have been completed.)	The primary attending surgeon's involvement in surgeries on two different patients in two different rooms when the critical or key components of the procedures are occurring all or in part at the same time is not appropriate.[c]
Overlapping surgeries permitted	Teaching physician must be present during the critical or key portions of both procedures. The teaching physician may become involved in a second procedure when all of the key portions of the initial procedure have been completed. If the teaching physician is not present during non-critical and non-key portions and is participating in another surgical procedure, she/he must arrange for another qualified surgeon to immediately assist in the other case should the need arise.	Primary attending surgeon must be present during all critical or key portions of the procedure and be in the operating suite or be immediately available for the entire procedure.[d] If the primary attending surgeon is not present or immediately available, another attending surgeon should be assigned as being immediately available.
Critical or key portion	Critical or key portions are the parts of the procedure as determined by the teaching physician, but generally do not include the opening or closing of the surgical site.	Critical or key portions are the parts of the procedure, as determined by the surgeon, when essential technical expertise and surgical judgment are required in order to achieve an optimal patient outcome. The surgeon may leave the operating room for a procedure-related task, during which she/he must be immediately available.[e]
Patient consent	A well-designed informed consent policy will include a discussion of the physicians, including residents, who will perform important surgical tasks and whether the teaching physician will not be physically present in the same operating room for some or all of the surgical tasks performed by residents.	As part of the pre-operative discussion, patients should be informed of the different types of qualified medical providers that will participate in their surgery and their respective roles explained. If an urgent or emergent situation arises that requires the surgeon to leave the operating room unexpectedly, the patient should be subsequently informed. The patient needs to be informed that an overlapping surgery will be conducted.
Immediately available	Immediately available is generally not defined except to indicate that a surgeon performing another procedure would not be considered to be immediately available.	Immediately available means reachable through a paging system or other electronic means and should be defined more completely by the local institution.

	CMS's Medicare Guidance[a]	ACS's Guidance
Backup surgeon arrangement	If circumstances prevent the teaching physician from being immediately available, she/he must arrange for another qualified surgeon to be immediately available to assist with the procedure, if needed.	When the primary attending surgeon is not present or immediately available, another attending surgeon should be assigned as being immediately available.
Documentation requirements	The teaching physician must document in the medical record that she/he was physically present during the critical or key portions of the surgery.	No similar provision.
Unanticipated circumstances	No similar provision.	If an unanticipated circumstance occurs that requires the surgeon to leave the operating room before completing the critical portion of the surgery, a backup attending surgeon must be identified and available to come to the operating room promptly.[f]
Other limitations on the practice of overlapping surgeries	(1) For minor procedures that take only a few minutes to complete, the teaching physician must be present for the entire procedure to bill for it. (2) In the case of "three concurrent surgical procedures", the role of the teaching surgeon is classified as a supervisory service and not payable under the physician fee schedule.[g]	Not applicable

[a]With one exception, the above requirements must be met to bill Medicare for surgical, high-risk, or other complex procedures involving a teaching physician, as described in CMS's billing guidance. See CMS, *Medicare Claims Processing Manual: Chapter 12 – Physicians/Nonphysician Practitioners* (revised March 2016). The exception is the patient consent requirement, which comes from CMS's interpretive guidance. See CMS, *State Operations Manual: Appendix A – Survey Protocol, Regulations and Interpretive Guidelines for Hospitals* (revised November 2015), Section A-0955.

[b]For the purpose of this table and our analyses, we use the ACS's definitions of concurrent and overlapping surgeries to distinguish between the two types of surgical practices. ACS defines concurrent surgeries as surgeries when the critical components of the operations for which the primary attending surgeon is responsible are occurring at the same time. ACS defines overlapping surgeries as surgeries when the critical components of the first operation have been completed and the primary attending surgeon performs critical portions of a second operation in another room. While CMS's billing requirements generally do not refer to concurrent surgeries, those requirements make it clear that CMS will not pay physician fees for concurrent surgeries, as they are defined by ACS.

[c]ACS guidelines do contemplate valid exceptions. For example, in multidisciplinary operations, the guidelines note that it is appropriate for surgeons to be present only during the part of the operation requiring their expertise. Additionally, the guidelines note that if more than one emergency occurs at the same time, the surgeon may oversee more than one operation until other surgeons are available.

[d]ACS identifies two scenarios for overlapping surgeries.

[e]Per ACS guidance, procedure-related tasks could include review of pertinent pathology and diagnostic imaging, a discussion with the patient's family, and breaks during long procedures.

[f]ACS guidance states that unanticipated consequences include sudden illness or injury to the surgeon, life-threatening emergency elsewhere in the operating suite or contiguous hospital building, or an emergency in the surgeon's family.

[g]While the Medicare Claims Processing Manual refers to "concurrent" and not overlapping surgeries in this instance, the statement is made in a Section 100.1.2.A.2, titled "two overlapping surgeries."