

# Patient Safety Tip of the Week

December 19, 2017

## More on Overlapping Surgery

Lots has transpired since Boston Globe first published its investigative report ([Abelson 2015](#)) that ignited the controversy on double-booked surgery and the subsequent review by the Senate Finance Committee ([Senate Finance Committee 2016](#)). It didn't take long for everyone to agree that concurrent surgery (where critical parts of two surgeries might be taking place simultaneously) should be banned but we've been left with the debate about "overlapping" surgery. But details both about the frequency of overlapping surgery and its safety were largely lacking when the controversy first appeared.

In the 6 months since our last column on overlapping surgery quite a bit has happened. There has been a flurry of publications on the experience with overlapping vs. non-overlapping surgery, mostly at single institutions.

Analysis of a large series of neurosurgical cases at Emory University Hospital failed to demonstrate an association between overlapping surgery (OS) and complications, such as mortality, morbidity, or worsened functional status ([Howard 2017](#)). The Emory study was a well-done retrospective analysis that used propensity score weighting to adjust for differences between the cohorts receiving non-overlapping surgery (NOS) or overlapping surgery (OS). The researchers also divided OS cases into 2 subgroups: (1) overlapping in-room time (OS-R) where the preparation stage for the second patient occurred simultaneously with the emergence phase of surgery for the first patient and (2) overlapping skin-to-skin time (OS-StS).

After propensity score weighting regression analysis failed to demonstrate any statistically significant difference between either form of OS and NOS for mortality, overall or severe morbidity, ICU LOS, overall LOS, discharge location, functional status at discharge or within the 90-day global period, unexpected readmission within 30 days, or unplanned return to the OR or procedure room.

After use of propensity score weighting to adjust, the only differences between the NOS and OS groups were in-room and skin-to-skin operating times and presence of a fellow. Median surgical times were significantly longer for patients in the OS cohort vs the nonoverlapping surgery cohort (in-room time, 219 vs 188 minutes; skin-to-skin time, 141 vs 113 minutes). Longer in-room time (but not skin-to-skin time) was associated with morbidity, but not mortality or followup functional status.

A retrospective review of over 1000 consecutive nonemergent neurosurgical procedures ([Guan 2017](#)) also failed to demonstrate an association between OS and complications, such as mortality, morbidity, or worsened functional status. The overall complication rate was not significantly higher for overlapping cases than for nonoverlapping cases (26.3% vs 26.9%), nor was the rate of serious complications (14.7% vs 11.8%).

Another study of over 7000 neurosurgical patients in an urban academic hospital found no difference between overlapping surgery and non-overlapping surgery for length of stay, estimated blood loss, discharge location, 30-day mortality, 30-day readmission, return to operating room, acute respiratory failure, and severe sepsis ([Zygourakis 2017a](#)). Procedure times, however, were longer in patients with overlapping surgery (214 vs 172 min). And a study of over 2000 spine surgeries at UCSF ([Zygourakis 2017b](#)) found equivalent rates of 30-day mortality, readmission, return to the operating room, estimated blood loss, length of stay, and total hospital cost but overlapping surgeries had longer procedure times (estimate = 26.17) and lower rates of discharge to home (odds ratio 0.65).

We previously reported in our December 13, 2016 Patient Safety Tip of the Week “[More on Double-Booked Surgery](#)” the retrospective review comparing overlapping surgery with non-overlapping surgery at the Mayo Clinic ([Hyder 2017](#)). Over 10,000 cases of overlapping surgery were matched to a similar number of non-overlapping surgeries. Adjusted odds ratio for inpatient mortality was greater for non-overlapping procedures (adjusted odds ratio, OR = 2.14 vs overlapping procedures) and length of stay and morbidity were no different. And in our May 2017 What's New in the Patient Safety World column “[The Concurrent Surgery Debate Continues](#)” we noted an abstract presented at the 2017 American Association of Neurological Surgeons (AANS) Annual Meeting ([Bohl 2017](#), [Melville 2017](#)) which found better, not worse, outcomes with overlapping surgery. The better outcome measures included hospital length of stay, return to the operating room, and disposition status. Procedure length, however, was longer in the overlapping cases.

And in our November 29, 2016 Patient Safety Tip of the Week “[Doubling Down on Double-Booked Surgery](#)” we highlighted the study done by Zhang and colleagues at UCSF comparing overlapping cases with non-overlapping cases for a variety of orthopedic surgical procedures performed in an academic **ambulatory** surgery setting ([Zhang 2016](#)). The latter found no difference in patient operating room time, procedure time, and 30-day complication rates between overlapping and non-overlapping surgery.

And the MGH, after the original Boston Globe Spotlight story, did its own review of concurrent/overlapping surgery and concluded there were no adverse effects from this practice (see our November 10, 2015 Patient Safety Tip of the Week “[Weighing in on Double-Booked Surgery](#)”).

Finally, one study we have been citing for the past year has now been published in full form in a peer reviewed journal ([Ravi 2017](#)). Researchers looked at two cohorts in Ontario, Canada: hip fracture patients and patients undergoing total hip replacement.

They identified overlapping surgery from administrative data as surgery in which the surgeon was involved in two cases with an overlap as greater than 30 minutes of simultaneous operating room time (and <3 hours to exclude outliers), They matched overlapping and nonoverlapping hip fractures by patient age, patient sex, surgical procedure (for the hip fracture cohort), primary surgeon, and hospital. Followup period was 1 year, considerably longer than most of the US studies. Primary outcomes were the occurrence of an infection, revision, or dislocation within a year. Those were selected because they are the most likely to result from technical errors, which in turn may occur during unsupervised portions of the procedure. Other outcomes of interest were duration of surgery and death within 90 days After matching, overlapping hip fracture procedures had a statistically significant greater risk for a complication (hazard ratio 1.85), as did overlapping THA procedures (hazard ratio 1.79). Moreover, for the overlapping hip fracture operations, **increasing duration of operative overlap was associated with increasing risk for complications** (adjusted odds ratio, **1.07 per 10-minute increase in overlap**). For hip fracture patients the complications in the overlapping group were primarily infections and revisions (the THA population was underpowered to comment on individual complications).

Zhang ([Zhang 2017](#)), in an editorial accompanying the Ravi study, discussed possible reasons that the results of the Ravi study differed from the study they had done ([Zhang 2016](#)). The Zhang study patients had a variety of outpatient procedures performed on an ambulatory basis and were generally healthy patients, compared to the patient cohort in the Ravi study which was older and likely had many more comorbidities. The Ravi study also had the opportunity to identify complications occurring beyond 30 days and those that might have been identified at other hospitals. Another strength of the Ravi study was that the Ontario administrative data recorded the time the patient entered and exited the operating room. Zhang also questioned whether there were differences in the surgical teams (eg. the percentage of cases with residents or fellows) and whether some of the Ravi cohort cases actually have been examples of concurrent rather than overlapping surgery.

One huge difference between the Ravi study and the US studies is in the relative percentages of cases done as overlapping cases. Whereas rates of 70% or higher may apply to orthopedic cases in the US, only 2.5% of hip fracture procedures and 3% of THAs were performed overlapping with another procedure in the Ontario cohorts.

So, to summarize, we now have at least 8 retrospective cohort studies supporting the safety of overlapping surgery and a single one noting an increased risk of complications with overlapping surgery.

But there is a basic problem with all these studies. Untoward events related to overlapping surgery, particularly serious ones, are not common. In fact, the vast majority of overlapping surgeries are accomplished without any problems. The serious events therefore get “buried” or “diluted out” in any large series. The only real way to determine whether overlapping surgery caused or contributed to such events is to perform root cause analysis of all cases with adverse events, a time- and resource-intensive process. A

second problem is that, even in those studies that used propensity score adjustments to minimize bias, there is likely an element of selection bias. There is really no way from administrative data or even chart review to fully understand why non-overlapping surgery was chosen over overlapping surgery or vice versa.

Those of us involved in patient safety have all undoubtedly seen instances in which overlapping surgery was a contributing factor to or root cause of an adverse event. And just because the population-based studies seem to show a relative safety of overlapping surgery, it does not mean we don't need to pay attention to the dangers. Wrong-site surgery and retained surgical items are also relatively rare events. Yet we strive to prevent all such cases of those. Why should events related to overlapping surgery be treated differently?

The one thing that is reassuring from these studies is that, with the exception of the Ontario study, there does not seem to be an increased rate of surgical site infections in cases of overlapping surgery. That is somewhat surprising to us, given that virtually all the studies have shown that **procedure durations are longer in overlapping surgery**. We've actually done several columns on prolonged surgical duration (see list at the end of today's column) and you've heard us often use the statistic that infection rates increase by 2.5% for every half hour of surgery ([Procter 2010](#)). Many of the above studies showed mean surgical durations on the order of 30 minutes longer in overlapping cases. Thus, we would have predicted we'd see increased infection rates in such cases. But note that those are mean durations. Quite likely there are many cases with prolonged durations of, say, 10 minutes and then other cases with more prolonged durations that raise the mean. Perhaps the latter ones are associated with increased infection rates. That cannot be determined from the currently published studies. It is interesting that in the Canadian study the complication rate did increase incrementally as the duration of overlap increased.

Views of overlapping surgery are largely in the eye of the beholder. A survey of otolaryngologists ([Cognetti 2017](#)) found 40.4% of respondents reported performing some form of multiple-room surgery (subspecialists were more likely than general otolaryngologists to do multi-room surgery). Most believed that regulations disallowing multiple-room surgery would result in an increase in late starts (73.5%), an increase in the time to schedule surgery (84.5%), a detriment to residency training (63.1%), and no improvement in patient safety (60%). The authors conclude that policy changes that restrict multiple-room surgery must consider a potential unintended negative impact on patient care and access.

The perspective of the patient was noted in our May 2017 What's New in the Patient Safety World column "[The Concurrent Surgery Debate Continues](#)". A survey ([Kent 2017](#)) looked at knowledge of overlapping surgery, expectations on disclosure during the informed consent process, and their willingness to participate in such a procedure. That survey found that only 3.9% of respondents had any knowledge of the practice of overlapping surgery. Interestingly, though the majority of respondents were not supportive of the practice, 31% supported or strongly supported this practice. But 94.7%

believed that the attending surgeon should inform them in advance of overlapping surgery and 95.6% would want definition of the critical components of the operation. And 91.5% felt that the surgeon should document what portion of the operation he or she was present for.

Our own perspective remains that we would not want to consent to overlapping surgery without very specific conditions. Here are the issues we've described in our original and subsequent columns on overlapping surgery:

### **The “Critical Part of the Surgery”**

Hospitals must develop lists of which surgical procedures might be appropriate for overlapping surgery and those for which it is never appropriate. Once those lists are developed they must address the issue of definition of “**the critical portion of the surgery**” . That remains a huge gray zone. Historically that definition has largely been left up to the individual surgeon and there is likely wide variability in such definitions.

Yes, there are times during surgery that complications, emergencies, and unexpected circumstances are more likely to occur. Yet anyone who has spent any time in OR's or analyzing perioperative adverse events will attest to the fact that those occurrences may pop up at the most unexpected times.

Many may define the critical portion as everything except skin closure, the latter being delegated to residents, fellows or surgical assistants. But even for all you who would delegate skin closure as “routine, not requiring special expertise” what would you do in the following real-life scenarios if the primary surgeon is now in another room doing a “critical” part of that second surgery:

- After wound closure, the scrub nurse or surgical tech notes that an instrument on the instrument tray is broken and the missing part cannot be found.
- After wound closure, it is noted that the surgical specimen removed to be sent for lab analysis is “missing”.

Ideally, definitions of the “critical part” of each procedure would be defined by specialty societies but that has yet to happen. Rather than allowing individual surgeons to define the “critical part” many have relied upon the clinical department chairs to establish the definitions. But Mello and Livingston, in their perspective on “The Evolving Story of Overlapping Surgery” ([Mello 2017](#)), take the view that the individual clinical departments have an innate conflict of interest and should **not** be the ones to establish what constitutes the “critical part” of procedures. Rather, lacking guidance from specialty societies, they call for multidisciplinary hospital committees to make those determinations. We've come around to agreeing with that point of view.

While we personally would not want our surgeon to leave during any part of our own surgery, we would describe the “critical part” of the surgery as “from the pre-op huddle through the final surgical ‘count’ and examination of all tools and materials removed

from the surgical site”. Essentially that would just leave the skin closure as the only portion of the surgery for which the attending surgeon would not be present. While that might better ensure our own safety, note that it would probably still result in the surgeon failing to participate in the post-surgery debriefing. Such absence might result in failure to identify factors that might prevent an adverse event to subsequent patients. Note that this definition would also imply that the second case is also not started until the surgeon has participated in the pre-op huddle for that second case.

It’s interesting that we often hear surgeons say “we’re there for all but the skin closure”. Yet the studies noted above typically showed a mean difference in case duration on the order of 30 minutes between overlapping and non-overlapping cases. We find it doubtful that a resident or fellow or surgical assistant would take 30 minutes longer to close the skin than the attending surgeon would. So we suspect that most surgeons are defining their “critical part” as considerably less than “all but skin closure”.

### **Timeouts**

Any policy for overlapping surgery must include specific reference to the timeout process. The attending surgeon should be an active participant in the initial timeout in every case he/she is responsible for. Moreover, when the attending surgeon switches from one case to another there must be an additional timeout, just like there must always be additional timeouts when other surgeons may come in for part of a case or when there is any other change in medical personnel. This should apply even when the attending surgeon was an active participant in the original timeout because events may have occurred in the interim during his/her absence.

### **Post-Procedure Debriefing**

We recall a case in which a surgeon encountered a problem with a piece of equipment during a non-overlapping case. The nurse commented “Oh, Dr. Jones had a problem with that on Monday.” The surgeon asked “Why wasn’t it flagged during the post-surgical debriefing?”. The nurse responded “We didn’t have a debriefing because Dr. Jones had already left for his other (overlapping) case.”.

If the attending surgeon leaves one OR prior to completion of the case he/she is obviously not going to participate in the post-op debriefing. Thus, in at least half the double-booked cases the key individual (attending surgeon) is not part of the debriefing. We consider the debriefing to be a very important patient safety tool (see list of our prior columns on debriefings listed at the end of today’s column).

In debriefings you are basically asking “What went well?”, “What didn’t go well?” and “What could we do better next time?”. You’ll often identify the need to fix broken equipment or ensure the availability of appropriate backup instruments. Sometimes it’s something simple like tray set-ups or equipment set-ups that interfered with the surgeon’s

movements during the procedure. And you need to be sure that someone follows up on issues identified and communicates back to the group when they are fixed. Also, make sure you identify at the debriefing any problems you had with team communication during the procedure.

Absence of the attending surgeon from such debriefings (or lack of presence of that surgeon from substantial portions of the entire surgery) obviously is a missed opportunity to improve future care.

The debriefing is also an opportunity for the attending surgeon to discuss issues with the resident or fellow who may have been a major participant or even the primary surgeon in the case.

Ironically, in the above-mentioned anecdote any complication would be ascribed to the non-overlapping case even though the root cause was the overlapping case from the prior day!

### **The Pre-op “Huddle”**

Just as many cases of overlapping surgery lack a post-surgery debriefing, many of the second (or subsequent) cases lack participation of the surgeon in a pre-op “huddle” or briefing. These are times when the surgeon, anesthesiologist, and circulating nurse get together and discuss the upcoming case, making sure all needed equipment or implants are available and discussing potential events or contingencies. It is conceivable that such huddles could be held for multiple cases prior to the first case (assuming all parties for each case are available at that time) but, in our experience, such huddles are more informative when done immediately prior to a case and confined to one specific case at a time. If the case will be an overlapping case, the identity of the backup surgeon should be clarified during both the pre-op huddle and the timeout.

### **Duration of surgery**

The original Boston Globe report cited anesthesiologists complaining that patients often had to wait, while still under anesthesia, for considerable periods while their attending surgeon was elsewhere. The Globe cites an e-mail noting that such waits for the attending surgeon while the patient is under anesthesia may sometimes be as long as 2 hours.

We’ve done several columns discussing the complications that may occur as the duration of a surgical procedure increases (see list of our prior columns on surgical duration listed at the end of today’s column). Our March 10, 2009 Patient Safety Tip of the Week [“Prolonged Surgical Duration and Time Awareness”](#) discussed time unawareness during many surgeries. In addition to the potential impact on infectious complications, we noted that there are other potential patient safety issues related to prolonged surgical duration such as DVT, decubiti, hypothermia, fluid/electrolyte shifts, pulmonary complications,

nerve compression, compartment syndromes, and rhabdomyolysis. Long-duration cases also increase the likelihood of personnel changes that increase the chance of retained foreign objects or retained surgical items (see our August 19, 2014 Patient Safety Tip of the Week “[Some More Lessons Learned on Retained Surgical Items](#)”). And the fatigue factor comes into play with longer cases, increasing the likelihood of a variety of other errors.

But the biggest risk is for surgical site infections. Surgical case duration is one of the few modifiable risk factors for **surgical infections**. A number of studies in the past have demonstrated an association between perioperative infection and the duration of the surgical procedure. In our January 2010 What’s New in the Patient Safety World column “[Operative Duration and Infection](#)” we noted a study ([Proctor et al 2010](#)) which found the infectious complication rate increased by 2.5% per half hour and hospital length of stay (LOS) also increased geometrically by 6% per half hour.

### **Other Infection Control Issues**

We’ve done several columns on the potential adverse effects of OR foot traffic and unnecessary opening and closing of OR doors (see list at the end of today’s column). But overlapping surgery raises one other concern: compliance with appropriate sterile techniques. We would anticipate that any surgeon leaving an OR must remove gloves, gown, masks and any other protective gear, then perform appropriate hand hygiene and don entirely new gear before entering the next OR. Knowing habits of some surgeons (and others) in multiple OR environments, we are willing to bet that workarounds are common and shortcuts taken.

### **Definition of “Immediately Available”**

When overlapping surgery is performed, there should be **designation of a backup surgeon** who will be “immediately available” to intervene if the original attending surgeon is doing other surgery. Defining “**immediately available**”, as anticipated, has been controversial. There has been wide variation in the timeframes and locations in the policies of respondent hospitals. The American College of Surgeons guidance ([ACS 2016](#)) states the surgeon should be “reachable through a paging system or other electronic means, and able to return immediately to the operating room.” The ACS did not define a timeframe for response. But this doesn’t mean someone who might be seeing patients in his/her office or clinic 3 floors away. (In fact, we suggest that you might as part of your quality management program occasionally try to get hold of that covering physician and see how long it actually takes for him/her to get to the OR.) In addition, this backup surgeon must be fully aware of his/her responsibilities and should have some knowledge of the case he is “covering”. He/she also obviously needs to be credentialed/privileged for the procedure that he/she is covering.

## **Multitasking**

We physicians often take pride in our ability to multitask. Such pride is probably misplaced. Any human activity that requires attention to two different scenarios is prone to error. Some will argue that the two surgeries involved are typically quite similar in nature. That actually makes it much more likely that details from one case may be transposed to the other case. For example, in orthopedic surgery it might be very easy to mistakenly call for an implant of a specific size (or other characteristic) that was appropriate for the “other” patient but not this patient.

## **The educational/training mandate**

A surgical “perspective” in the *Annals of Surgery* ([Beasley 2015](#)) defended the practice of overlapping surgery in the name of training: “The incremental acquisition of surgical competence during training is critically important to maintaining a surgical workforce.” No one can argue with that statement. However, incremental delegation of procedures to residents and fellows and provision of incremental responsibility should not require that the attending surgeon be absent from the room.

## **The Ethical Issue(s)**

And then there is the ethical issue (which is really the most important issue). The biggest revelation in the Boston Globe report was that the patient was usually unaware that their attending surgeon might not be present for their entire surgery. It’s one thing to tell a patient during informed consent that residents and fellows and others will be involved in their surgery and may perform substantial portions of the surgery. But failure to tell them that their attending surgeon may be in a totally different room doing surgery on another patient is a huge ethical breach. Quite frankly, no patient in their right mind should agree to have a major surgical procedure knowing that the attending surgeon, in whom they have placed their trust, will not be in the OR for the duration of their surgery.

**Informed consent** must be transparent and presented in a manner that allows patients to understand the potential ramifications of their surgeon being in another room during any portion of their surgery. A recent viewpoint on informed consent in concurrent surgery ([Langerman 2016](#)) points out the “information asymmetry” involved, where “surgeons know much and our patients know little about what will happen during their operation.” Patients may not understand the implications of potentially spending extra time under anesthesia in the event their surgeon is delayed in responding to something in their case because he/she is doing surgery on another patient. Most patients in academic centers understand that physicians in training will actively participate in the surgery and likely improve the quality of their overall care. But they also likely expect that their primary surgeon will be present to oversee all aspects of their surgery. Dr. James Rickert, in an informative Health Affairs Blog ([Rickert 2016](#)), also suspects that in discussing overlapping surgery “Euphemisms, incomplete information, and oblique discussions will

be the norm.” It is clear that this discussion must take place at a time when the patient would have adequate time to digest the information, ask questions, and be able to cancel the surgery if desired. So having the discussion on the day of surgery is a no-go. Some of the hospitals included a specific time period, such as “at least 24 hours prior to the surgery”, but many left the wording vague such as “sufficiently prior to” surgery. In a 2016 editorial Healy ([Healy 2016](#)) recommended surgeons “do the right thing” and obtain specific informed consent at least 2 weeks prior to the operation. This consent should include a specific description of what the attending surgeon will and will not do.

We are pleased to see that many, if not most, hospitals have adopted policies in which patients must be told of overlapping surgery during informed consent. Good examples are the Seattle area hospitals that have developed such policies ([Q13 News 2017](#)). A sample consent form from one of those hospitals even includes reference to the designated attending surgeon who might serve as a backup.

There may be a second ethical issue as well. What would you do if a surgeon on your staff declines to do a patient’s surgery if that patient does not consent to overlapping surgery? What if the surgeon’s response is “You should find another surgeon or another hospital.”? We think it would be unethical for a surgeon to refuse to perform surgery on a patient who refuses to consent to overlapping surgery. It may be appropriate to let a patient know his/her surgery may not be able to be scheduled as soon if it is not overlapping. But to refuse to do the surgery as a nonoverlapping case would be unethical. We feel that including specific wording to that effect in the informed consent document or the educational materials provided to the patient should be part of every hospital’s policy on overlapping surgery. And hospitals obviously need to make it clear to their staff that such refusal would not be tolerated.

### **Who Should Be Allowed to Perform Overlapping Surgery?**

Hospitals obviously need to determine which types of surgery should never be allowed to be double-booked. But one issue that has not received attention in the literature is which surgeons should be allowed to perform overlapping surgery and how that question relates to credentialing and privileging. One might consider requiring demonstration of proficiency for new surgeons in the credentialing and privileging process before double-booking is allowed. But at the other end of the spectrum, the older surgeon whose surgical skills are still good but whose ability to multitask may be starting to deteriorate (you all know this surgeon but no one is willing to speak up), is a much more difficult situation. What objective criteria would you use to tell that surgeon he/she can still do surgery but can no longer double-book?

### **Monitoring Overlapping Surgery**

Perhaps the strongest recommendations in the Senate committee report ([Senate Finance Committee 2016](#)) deal with **ensuring compliance** with policies. The report stresses that

developing policies on overlapping surgery are an important first step but that training all staff to ensure they understand the policies and then overseeing that the policies are adhered to are critical steps. They liked language similar to that used by some hospitals:

- 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.

They also liked language used by some hospitals to describe roles played by others staff in ensuring compliance with the policies:

- 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.

Monitoring surgeon location and tracking the critical portions of the surgical procedures is also considered important in the Senate committee report. Many hospital policies simply used the CMS billing requirement that the surgeon document in the medical record that he/she was present for the critical portion(s) of the surgery. We previously noted the Massachusetts Board of Registration in Medicine proposal requiring that **surgeon presence or absence in the room at various times be documented**. We like the latter idea. We actually have proposed hospitals record entry and exit of **all** OR personnel in attempt to reduce opening and closing of OR doors (which may predispose to infections) as described in our July 26, 2016 Patient Safety Tip of the Week "[Confirmed: Keep Your OR Doors Closed](#)".

In our November 29, 2016 Patient Safety Tip of the Week "[Doubling Down on Double-Booked Surgery](#)" we also suggested that you might as part of your quality management program occasionally try to get hold of that "backup" physician and see how long it actually takes for him/her to get to the OR.

## **Our Take**

From all the above you can see that we are not big fans of overlapping surgery. Quite frankly, we'd like to see it disappear completely. However, we are pragmatic and realize it is probably not going away soon. One point worth noting from a recent comment and reply on overlapping surgery ([Hyder 2017b](#), [Livingston 2017](#)) is that we agree with Hyder et al. that "the safety of overlapping surgery and its success in improving access to surgical care are highly local phenomena". There are some organizations that do a better job than others.

We hope that you'll heed the concerns and recommendations from today's column and our previous columns listed below. We've also set up our "[Overlapping Surgery Checklist](#)" to help you plan for safe implementation if your organization does allow overlapping surgery.

**See our previous columns on double-booked, concurrent, or overlapping surgery:**

- November 10, 2015 "[Weighing in on Double-Booked Surgery](#)"
- November 29, 2016 "[Doubling Down on Double-Booked Surgery](#)"
- December 13, 2016 "[More on Double-Booked Surgery](#)"
- May 2017 "[The Concurrent Surgery Debate Continues](#)"

And our "[Overlapping Surgery Checklist](#)"

**See our prior columns on huddles, briefings, and debriefings:**

- April 9, 2007 "[Make Your Surgical Timeouts More Useful](#)"
- May 22, 2007 "[More on TeamSTEPPS™](#)"
- December 9, 2008 "[Huddles in Healthcare](#)"
- March 10, 2009 "[Prolonged Surgical Duration and Time Awareness](#)"
- January 11, 2011 "[NPSA \(UK\) 'How to Guide': Five Steps to Safer Surgery](#)"
- March 2009 "[Surgical Team Training](#)"
- April 2012 "[Operating Room Briefings and Debriefings](#)"
- July 31, 2012 "[Surgical Case Duration and Miscommunications](#)"
- January 2014 "[A Tool to Assess Pre-op Briefings](#)"
- July 22, 2014 "[More on Operating Room Briefings and Debriefings](#)"
- March 17, 2015 "[Distractions in the OR](#)"

**Our prior columns focusing on surgical case duration:**

- March 10, 2009 "[Prolonged Surgical Duration and Time Awareness](#)"
- January 2010 "[Operative Duration and Infection](#)"
- July 21, 2012 "[Surgical Case Duration and Miscommunications](#)"
- August 26, 2014 "[Surgeons' Perception of Intraoperative Time](#)"
- December 30, 2014 "[Data Accumulates on Impact of Long Surgical Duration](#)"
- November 24, 2015 "[Door Opening and Foot Traffic in the OR](#)"
- July 26, 2016 "[Confirmed: Keep Your OR Doors Closed](#)"
- November 7, 2017 "[Perioperative Neuropathies](#)"
- December 2017 "[A Fix for OR Foot Traffic?](#)"

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Our own “Overlapping Surgery Checklist”.

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