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**OVERLAPPING AND CONCURRENT SURGERIES: AN ANALYSIS
OF INFORMED CONSENT WHEN THERE IS INCOMPLETE RISK
INFORMATION**

ABSTRACT

The practice of overlapping and concurrent surgeries—where a single surgeon runs two or more operations at once—is not new. However, it was not until 2015, through the Boston Globe’s investigation, that the general public learned the details of such practices. Lack of transparency surrounding these practices regrettably has created a culture of distrust within the surgeon-patient relationship. The core concern of overlapping and concurrent surgeries is the potential for patient risk. Scientific research on how much additional risk overlapping or concurrent surgeries place on the patient is still in its early stages. This article explores current scientific research, noting the limitations of the studies and advocating for further research efforts. It then examines various ways the law should handle overlapping and concurrent practices. This article concludes that under the informed consent doctrine and due to the fiduciary nature of the treatment relationship, surgeons should be required to disclose to the patient whether an operation will proceed in an overlapping or concurrent manner even when risk information is incomplete. Ultimately, this article urges health care institutions to establish disclosure policies for overlapping and concurrent surgeries to allow for open surgeon-patient communication and truly informed patient consent.

I. INTRODUCTION

In August 2012, after undergoing an eleven-hour spinal operation at Massachusetts General Hospital, Tony Meng awoke to discover that at forty-one years old he would live the rest of his life as a quadriplegic.¹ It was not until medical malpractice litigation commenced that Mr. Meng learned the troubling details of his operation: His surgeon, Dr. Wood, was also performing spinal surgery on another patient at the same time as Mr. Meng's operation.² The morning of Mr. Meng's operation, unknown to Mr. Meng, Dr. Wood undertook the task of "two patients, two operating rooms, moving back and forth from one to the other, focusing on the challenging tasks that demanded his special skills, leaving the other work to a general surgeon, who assisted briefly, and two surgeons in training."³ Although paralysis was a known risk of Mr. Meng's procedure, questions emerged such as "is it right . . . for surgeons to divide their attention between two operating rooms—especially when the patients don't know? Can [surgeons] really do two overlapping operations equally well?"⁴

The *Boston Globe's* publication of Mr. Meng's story sheds light on surgical practices historically masked from the public.⁵ The core concerns of these surgical practices, which are termed either concurrent or overlapping surgeries, include their risks or potential risks, inadequate informed consent, and the amplification of distrust within the surgeon-patient relationship.⁶ To use broad definitions, concurrent or overlapping surgeries are two or more surgeries scheduled in two or more operating rooms involving the same surgeon so that substantial portions overlap.⁷ Concurrent surgeries are those in which critical portions overlap, whereas overlapping surgeries are those in which only non-critical portions overlap.⁸ In both cases, one primary attending surgeon supervises the operation and delegates other responsibilities to residents, trainees, or assistants; such delegation allows the attending to oversee two critical operations at once (concurrent procedure) or to leave one procedure to immediately begin another (overlapping procedure).⁹ Because concurrent and

1. Jenn Abelson et al., *Clash in the Name of Care*, BOS. GLOBE (Oct. 25, 2015), <https://apps.bostonglobe.com/spotlight/clash-in-the-name-of-care/story> (last visited Feb. 22, 2018).

2. *Id.*; Michelle M. Mello & Edward H. Livingston, *Managing the Risks of Concurrent Surgeries*, 315 JAMA 1563, 1563 (2016).

3. Abelson et al., *supra* note 1.

4. *Id.*

5. Alexander Langerman, *Concurrent Surgery and Informed Consent*, 151 JAMA SURGERY 601, 601 (2016).

6. *See* Mello & Livingston, *supra* note 2, at 1563–64.

7. *See id.* at 1563.

8. Am. Coll. of Surgeons, *Statements on Principles*, BULLETIN, Sept. 2016, at 19, 26.

9. *See id.*; Sara K. Wheeler & Lauren S. Gennett, *Compliance Checkup: Increased Scrutiny of Concurrent Surgeries*, COMPLIANCE TODAY (May 25, 2016), <http://complianceandethics.org/compliance-checkup-increased-scrutiny-concurrent-surgeries> (last visited Feb. 22, 2018).

overlapping surgeries allow for more surgeries per day, patients benefit from reduced wait times and increased access to high-demand surgeons, while hospitals benefit from maximized efficiency.¹⁰ On the other hand, critics and a majority of the public perceive greater risks when a primary attending surgeon's attention is divided between two patients. In fact, when asked if they would consent to an operation performed by a non-supervised resident, only 18.2% of patients consented.¹¹

This article's central claim is that under the informed consent doctrine and due to the fiduciary nature of the treatment relationship, surgeons should be required to disclose to the patient whether an operation will proceed in an overlapping or concurrent manner even when risk information is incomplete. First, in Part II this article describes the current practices of and distinctions between concurrent and overlapping surgery. Next, in Part III this article explores the current state of regulation, showing that regulations of these practices are lacking. In Section IV.A, this article outlines existing research through January 2017 on the risks of overlapping practices. Because such surgical practices historically have remained hidden from public view,¹² just four academic research studies to date address the risks of overlapping surgeries.¹³ While this research concludes that performing surgeries in an overlapping fashion does not increase the risk of adverse outcomes,¹⁴ this article argues these studies have severe limitations, and it is too premature to definitively say overlapping surgeries pose no additional risk. In Section IV.B, this article argues that it is only a matter of time before some risks will emerge and outlines the shape those risks could take. This article then goes on to make suggestions on how to better improve research efforts.

In Part V, the legal analysis begins with informed consent. In informed consent actions involving overlapping and concurrent surgeries, this article proposes that materiality not only can but should encompass the yet ill-defined

10. See Mello & Livingston, *supra* note 2, at 1563.

11. Christopher R. Porta et al., *Training Surgeons and the Informed Consent Process: Routine Disclosure of Trainee Participation and Its Effect on Patient Willingness and Consent Rates*, 147 ARCHIVES SURGERY 57, 59 (2012).

12. See Langerman, *supra* note 5, at 601.

13. See, e.g., Keenan W. Yount et al., Univ. of Va. Health Sys., Plenary Talk at the American Association of Thoracic Surgery Annual Meeting: Attendings' Performing Simultaneous Operations in Academic Cardiothoracic Surgery Does Not Increase Operative Duration or Negatively Affect Outcomes (Apr. 30, 2014) (presentation on file with author); Alan L. Zhang et al., *Overlapping Surgery in the Ambulatory Orthopaedic Setting*, 98 J. BONE & JOINT SURGERY 1859, 1859 (2016); Corinna C. Zygourakis et al., *Performing Concurrent Operations in Academic Vascular Neurosurgery Does Not Affect Patient Outcomes*, 127 J. NEUROSURGERY 1089, 1090 (2017); Joseph A. Hyder et al., *Safety of Overlapping Surgery at a High-Volume Referral Center*, 265 ANNALS SURGERY 639, 639 (2016).

14. See, e.g., Yount et al., *supra* note 13; Zhang et al., *supra* note 13, at 1864; Zygourakis et al., *supra* note 13, at 1091; Hyder et al., *supra* note 13, at 639.

risk of harm, and, as such, disclosure is required. This article further reasons that the imaginable risks of overlapping procedures are risks inherent to the procedure which require disclosure, rather than physician-specific risks which generally do not require disclosure.¹⁵ Even if the risks are deemed to be physician-specific, this article is still able to argue the practice warrants disclosure through the use of relevant case law. Alternatively, if informed consent law cannot provide a patient with a remedy, this article argues that as a matter of public policy, the law ought to reinforce the physician-patient trust relationship.¹⁶ One way patients may receive relief is under the negligent infliction of emotional distress cause of action. Yet because this cause of action is narrow, a better way to harness the benefits of trust is through institutional disclosure policies for overlapping and concurrent surgeries that allow for open surgeon-patient communication and truly informed patient consent.

II. THE DISTINCTION BETWEEN CONCURRENT AND OVERLAPPING SURGERIES

While often inappropriately used interchangeably, the terms overlapping surgery and concurrent surgery refer to two distinct types of surgery scheduling.¹⁷ In revising its guidelines on April 12, 2016, the American College of Surgeons (ACS) was the first organization to clearly distinguish concurrent from overlapping scheduling.¹⁸ Drawing on the ACS' definitions of surgical practices, *Figure 1* illustrates the various types of surgical scheduling in order from least overlap (Schedule A) to most overlap (Schedule D). The ACS defines “[c]oncurrent or simultaneous operations” as “[s]urgical procedures when the critical or key components of the procedures for which the primary attending surgeon is responsible are occurring all or in part at the same time.”¹⁹ *Figure 1* depicts such concurrent surgeries as Schedules C and D. On the other hand, the

15. See B. Sonny Bal & Theodore J. Choma, *What to Disclose? Revisiting Informed Consent*, 470 CLINICAL ORTHOPAEDICS & RELATED RES. 1346, 1354 (2012); *Blanchard v. Kellum*, 975 S.W.2d 522, 524 (Tenn. 1998).

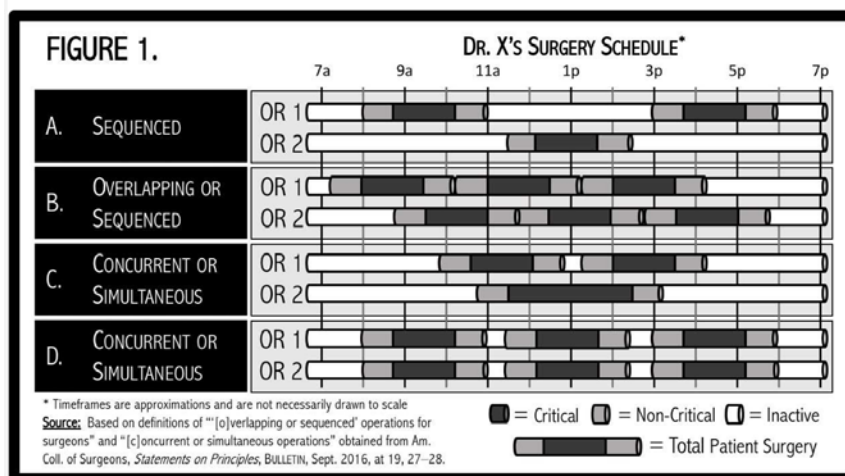
16. “The relationship of patient and physician is a fiduciary one of the highest degree. It involves every element of trust, confidence and good faith.” *Lockett v. Goodill*, 430 P.2d 589, 591 (Wash. 1967).

17. See *Overlapping Surgery Faces Scrutiny; Surgeons Make Decisions but Have Limits*, REP. ON MEDICARE COMPLIANCE, Oct. 2016, at 1, 2 (quoting Allan Kirk, M.D., surgeon in chief for Duke University Health System in North Carolina, as saying that “concurrent surgery and overlapping surgery . . . are two different things frequently confused as one”).

18. Am. Coll. of Surgeons, *supra* note 8, at 26. Not long after, the joint neurological societies issued a position statement outlining similar definitions to distinguish concurrent from overlapping surgical practices. AM. ASS'N OF NEUROLOGICAL SURGEONS, AM. BD. OF NEUROLOGICAL SURGERY, CONG. OF NEUROLOGICAL SURGEONS, & SOC'Y OF NEUROLOGICAL SURGEONS, POSITION STATEMENT ON INTRAOPERATIVE RESPONSIBILITY OF THE PRIMARY NEUROSURGEON 3–5 (July 20, 2016), <http://www.aans.org/pdf/Legislative/Neurosurgery%20Position%20Statement%20on%20Overlapping%20Surgery%20FINAL.pdf>.

19. Am. Coll. of Surgeons, *supra* note 8, at 27.

ACS defines “[o]verlapping or sequenced’ operations” as surgical procedures where “the primary surgeon [is] initiating and participating in another operation when he or she has completed the critical portions of the first procedure and is no longer an essential participant in the final phase of the first operation.”²⁰ The most extreme form of overlapping operations involves a scenario where a surgeon leaves the operating room of Patient 1 immediately after performing critical components on Patient 1 to begin critical operative components on Patient 2. *Figure 1* depicts this example as Schedule B. In this situation, if a surgery becomes delayed or if the surgeon is inefficient in arriving to the next room and scrubbing in, critical overlap could result.²¹



In December 2016, the U.S. Senate Finance Committee, utilizing its jurisdictional oversight of the Centers for Medicare and Medicaid Services (CMS), issued a report on concurrent and overlapping surgeries.²² Beginning its investigation in early 2016, the Senate Finance Committee set out to “understand the practice [of concurrent and overlapping surgery] and the frequency with which it occurs.”²³ In doing so, the Committee relied upon the above ACS definitions of “concurrent” and “overlapping” to distinguish the two practices. Because both the Senate Finance Committee’s and the ACS’ statements use the same distinctions between “concurrent” and “overlapping,” such definitions have become, in a way, the standard definitions of the practice and this article will use them in this manner throughout.²⁴

20. *Id.* at 27–28.

21. *See* Langerman, *supra* note 5, at 602.

22. STAFF OF S. FIN. COMM., 114TH CONG., CONCURRENT AND OVERLAPPING SURGERIES: ADDITIONAL MEASURES WARRANTED 1 (2016).

23. *Id.*

24. It is important to note that many of the sources referenced in this article interchange the terms “concurrent,” “overlapping,” “simultaneous,” and “double-booking,” which is inconsistent

III. THE CURRENT STATE OF REGULATION

Current requirements for and regulations of concurrent and overlapping procedures are lacking, and physician disclosure requirements are virtually nonexistent.²⁵ In order to receive federal funding from CMS for Medicare and Medicaid beneficiaries, hospitals must comply with a set of rules called Conditions of Participation (CoPs).²⁶ Similarly, most hospitals seek private accreditation through The Joint Commission (TJC), which requires compliance with TJC standards.²⁷ Presently, neither CMS' CoPs nor TJC's standards outline any health and safety requirements for concurrent or overlapping surgeries.²⁸

Despite the silence of the CoPs and TJC on concurrent and overlapping surgeries, there exists some, although only slight, regulation in the form of Medicare billing. CMS' *Medicare Claims Processing Manual* outlines that for a hospital to "bill Medicare for two overlapping surgeries, the teaching surgeon must be present during the critical or key portions of both operations."²⁹ Because the teaching surgeon must complete all critical portions of the first operation before moving to the second, by definition, concurrent surgeries are not permitted by CMS in these instances.³⁰ Additionally for Medicare billing, CMS requires that when the teaching physician leaves the first operation after completing the critical portions, "he/she must arrange for another qualified surgeon to immediately assist the resident in the other case should the need arise."³¹ However, these *Medicare Claims Processing Manual* provisions only apply to limited circumstances: Such rules only apply when academic medical centers seek payment for teaching procedures performed on Medicare

with both the ACS and Senate Finance Committee guidance. This article will use the terms "concurrent" and "overlapping" as defined by ACS and as adopted by the Senate Finance Committee. *See id.* at 4; Am. Coll. of Surgeons, *supra* note 8, at 27. Additionally, it is important to highlight that the ACS and Senate Finance Committee reports, while persuasive due to their authority, are not binding on health care organizations.

25. *See* STAFF OF S. FIN. COMM., *supra* note 22, at 1–2.

26. *Id.* at 2.

27. *Id.*

28. *Id.*

29. CTRS. FOR MEDICARE & MEDICAID SERVS., MEDICARE CLAIMS PROCESSING MANUAL § 100.1.2(A)(2) (2017), <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/clm104c12.pdf>. The Code of Federal Regulations (C.F.R.) also includes a similar billing provision. However, the C.F.R. does not expressly use the language "overlapping surgeries" but instead states that "[i]n the case of surgical, high-risk, or other complex procedures, the teaching physician must be present during all critical portions of the procedure and immediately available to furnish services during the entire service or procedure." 42 C.F.R. § 415.172(a)(1) (2011). Nevertheless, the C.F.R. reaches the same conclusion as the *Medicare Claims Processing Manual*: CMS will not pay for concurrent surgeries.

30. *See* CTRS. FOR MEDICARE & MEDICAID SERVS., *supra* note 29, at § 100.1.2(A)(2).

31. *Id.*

beneficiaries.³² Considering that only about 1,000 of 4,900 hospitals in the United States are academic medical centers³³ and seventeen percent of the population are Medicare beneficiaries,³⁴ the *Medicare Claims Processing Manual's* reimbursement provisions limiting concurrent surgeries do not reach all institutions or surgical cases.

Overall, regulation of overlapping and concurrent surgeries is at an infant stage, especially as the risks of such practices become better understood. When regulations are insufficient in affording protection, patients' only options are to turn to the courtroom for present relief or to hope for institutional disclosure policies or regulations in the future.

IV. THE RISKS OF CONCURRENT AND OVERLAPPING SURGERIES

For a patient to obtain any sort of remedy under the informed consent doctrine, a risk must be present.³⁵ This risk is what triggers the surgeon's duty to disclose.³⁶ If there is no risk, a patient cannot successfully claim that the surgeon breached his or her duty to disclose the risk. Thus, for overlapping surgeries to fall into the realm of informed consent, it first must be shown that an overlapping surgery poses some tangible risk to the patient.

A. Documented Risks of Overlapping Surgeries and the Insufficiencies of Current Research

As of January 2017, just four research studies have examined patient outcomes for overlapping surgery.³⁷ These studies analyze outcome differences

32. See STAFF OF S. FIN. COMM., *supra* note 22, at 3–4.

33. *Id.* at 4.

34. *Medicare Beneficiaries as a Percent of Total Population*, KAISER FAM. FOUND. (2015), <http://kff.org/medicare/state-indicator/medicare-beneficiaries-as-of-total-pop/?currentTimeframe=0> (last visited Feb. 3, 2018).

35. See *Canterbury v. Spence*, 464 F.2d 772, 781 (D.C. Cir. 1972).

36. See *id.*

37. See, e.g., Yount et al., *supra* note 13; Zhang et al., *supra* note 13, at 1860; Zygourakis et al., *supra* note 13, at 1090; Hyder et al., *supra* note 13, at 639. It is important to note that since the research for and writing of this article, researchers reached similar conclusions in a handful of additional studies. E.g., Corinna C. Zygourakis et al., *Comparison of Patient Outcomes in 3725 Overlapping vs 3633 Nonoverlapping Neurosurgical Procedures Using a Single Institution's Clinical and Administrative Database*, 80 NEUROSURGERY 257, 259–66 (2017); Larissa Sweeny et al., *Effect of Overlapping Operations on Outcomes in Microvascular Reconstructions of the Head and Neck*, 156 OTOLARYNGOLOGY–HEAD & NECK SURGERY 627, 629–34 (2017); Corinna C. Zygourakis et al., *Comparison of Patient Outcomes and Cost of Overlapping Versus Nonoverlapping Spine Surgery*, 100 WORLD NEUROSURGERY 658, 660–64 (2017); Brian M. Howard et al., *Association of Overlapping Surgery with Patient Outcomes in a Large Series of Neurosurgical Cases*, 153 JAMA SURGERY E1, E5–E8 (2017); Jian Guan et al., *Managing Overlapping Surgery: An Analysis of 1018 Neurosurgical and Spine Cases*, 127 J. NEUROSURGERY 1096, 1097–103 (2017); Jason B. Liu, *Outcomes of Concurrent Operations: Results from the American College of Surgeons' National Surgical Quality Improvement Program*, 266 ANNALS

between overlapping surgeries and conventional surgeries. While these four studies suggest that overlapping surgeries do not create a heightened risk for adverse patient outcomes,³⁸ this section will argue that the results of existing research must be approached with caution. This is because existing research (1) uses the terms “overlapping” and “concurrent” ambiguously, (2) fails to include a broad array of institutions, (3) involves a small surgical sample size, (4) is insufficient in terms of sampling surgical specialties, and (5) does not account for riskier patients. Similarly, the U.S. Senate Finance Committee noted in December 2016 that “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 . . . is too important to ignore.”³⁹ Therefore, the results from studies should be and will be analyzed with a critical eye and must not be used to conclusively determine that concurrent and overlapping surgeries pose no additional risks or no increased probability of risk to patients.

1. Existing Research Uses “Overlapping” and “Concurrent” Ambiguously

Entangled in the topic of the reliability of present research is the issue of what constitutes a concurrent or simultaneous case. Because the determination of which portions of a particular procedure are “critical” is ultimately at the discretion of the primary attending surgeon,⁴⁰ “few clinical or administrative databases will contain information about which operations are concurrent, overlapping, or have no conflict.”⁴¹ Therefore, the duration and type of overlap may not be accurately reported in data because “we have little way of knowing how prevalent either serious or trivial degrees of overlap between operations are in our hospitals. Anecdotally the practice appears common, although not universal.”⁴²

SURGERY 411, 413–18. Of these later studies, one study, performed by Bheeshma Ravi et al., deviates from the status quo by concluding that in the hip surgeries studied, overlapping surgeries *were* associated with an increased risk for surgical complications, particularly higher infection rates and early revision. Bheeshma Ravi et al., *Association of Overlapping Surgery with Increased Risk for Complications Following Hip Surgery: A Population-Based, Matched Cohort Study*, 178 JAMA INTERNAL MED. 75, 77–79 (2017).

38. Amanda J. Morris et al., *Commentary: How Should Hospitals Respond to Surgeons’ Requests to Schedule Overlapping Surgeries?*, 82 NEUROSURGERY E91, E91 (2018); *see also* Yount et al., *supra* note 13; Zhang et al., *supra* note 13, at 1866; Zygourakis et al., *supra* note 13, at 1092; Hyder et al., *supra* note 13, at 643.

39. STAFF OF S. FIN. COMM., *supra* note 22, at 17 (emphasis added).

40. *See* Fred G. Barker II, *Concurrent Surgery*, 127 J. NEUROSURGERY 1086, 1086 (2017); Am. Coll. of Surgeons, *supra* note 8, at 26; STAFF OF S. FIN. COMM., *supra* note 22, at 9; CTRS. FOR MEDICARE & MEDICAID SERVS., *supra* note 29, § 100.1.2(A)(2).

41. Barker, *supra* note 40, at 1086.

42. *Id.*

One clear example of this confusion appears in the University of California at San Francisco (UCSF) study, which does not outline the differences between concurrent and overlapping procedures and subsequently uses both terms arbitrarily.⁴³ Proper identification of the type of surgical overlap is important in accurately assessing the risk profile of concurrent surgeries compared to the risk profile of overlapping surgeries. When a surgeon moves back and forth during critical portions, as is the case in a concurrent procedure, there is higher probability of surgical complications, and these risks would warrant disclosure of surgeon absences. Yet perhaps when the primary surgeon is only absent during non-critical portions, there may be no added risks, such that no duty to disclose is triggered. Thus, it follows that when classification of the type of overlap is inaccurate, the risk profiles associated with those types are inaccurate.

2. Existing Research Fails to Include a Broad Array of Institutions

Existing research on overlapping surgeries only examines data from three institutions, which appears to be a far too small sample of health care organizations nationwide. The institutions analyzed include: (1) University of Virginia Health System, (2) UCSF, and (3) the Mayo Clinic.⁴⁴ At most, if data included all hospitals within each system, only approximately 0.75% of health systems are represented in current research.⁴⁵ On the other hand, at minimum, if only one institution within each system provided data, only about 0.054% of hospitals are represented.⁴⁶ Thus, an institutional sample of 0.054% to 0.75% is far too small sample to generalize the risk of overlapping procedures at all institutions because safer overlapping procedures require resources, institutional experience, and good surgeon judgment, for which many institutions may not be adequately equipped.⁴⁷

Embedded in the problematic generalization argument lies a potential argument for a sort of ‘institutional bias.’ For example, it is possible hospitals that have ample experience, advanced precautionary measures, and well-developed policies and procedures for handling overlapping surgeries are more inclined to initiate and publish safety and risk investigations because of the

43. Zygourakis et al., *supra* note 13, at 1090 (stating that concurrent surgeries are “also known as ‘running two rooms’ or simultaneous/overlapping operations” and using the terms concurrent and overlapping when discussing the exact same results).

44. See, e.g., Yount et al., *supra* note 13; Zhang et al., *supra* note 13, at 1859; Zygourakis et al., *supra* note 13, at 1089; Hyder et al., *supra* note 13, at 640.

45. See *AHA Guide 2018 Edition*, AM. HOSP. ASS’N, <https://www.ahadataviewer.com/additional-data-products/AHA-Guide/> (last visited Feb. 22, 2018) (noting there are around 400 U.S. health systems, networks, and alliances).

46. See *Fast Facts on U.S. Hospitals, 2017*, AM. HOSP. ASS’N (Jan. 2017), <https://www.aha.org/statistics/fast-facts-us-hospitals> (last visited Jan. 29, 2018) (noting there are 5,564 American Hospital Association registered hospitals in the United States).

47. See Hyder et al., *supra* note 13, at 644.

availability, and perhaps favorability, of data. Thus, present data is possibly skewed because it may only show the risk profiles of overlapping surgeries in above-average or exceptional facilities.

3. Existing Research Involves a Small Surgical Sample Size

Because existing studies on the effect of overlapping surgery on patient outcomes have only been performed in three institutions, it is only logical that the number of cases studied is also too low to definitively conclude that there are no patient risks from overlapping and concurrent surgeries. In the United States, 34,535,000 inpatient surgical procedures were performed in 2010, while 47,269,000 ambulatory surgeries were performed in 2006.⁴⁸ At this time, it is unclear as to how many surgeries are actually performed in an overlapping or concurrent manner.⁴⁹ However, the four research studies altogether analyzed 43,413 inpatient surgeries (including both non-overlapping and overlapping procedures) and 3,640 ambulatory surgeries (including both non-overlapping and overlapping procedures). In total, this means that the sample size studied only included roughly 0.13% of inpatient surgeries and roughly 0.0077% of ambulatory surgeries nationwide.⁵⁰ The research results from a sample size of far less than one percent of surgeries should not speak for the risks or probability of risk overlapping and concurrent procedures pose.

48. These calculations are based the most recent published data available. Therefore, these figures provide only rough approximations and are merely illustrative of a small sample size. In 2010, 51,430,000 inpatient procedures were performed in the United States, which when miscellaneous diagnostic and therapeutic procedures (totaling 16,895,000) are not included, the total number of surgeries equals 34,535,000. *Number of All-Listed Procedures for Discharges from Short-Stay Hospitals, by Procedure Category and Age: United States, 2010*, CTRS. FOR DISEASE CONTROL & PREVENTION (2010), www.cdc.gov/nchs/data/nhds/4procedures/2010pro4_number_procedureage.pdf. Further, in 2006, 53,329,000 ambulatory surgeries were performed in the United States, which when miscellaneous diagnostic and therapeutic procedures (totaling 6,060,000) are not included, the total number of surgeries equals 47,269,000. Karen A. Cullen et al., *Ambulatory Surgery in the United States, 2006*, NAT'L HEALTH STATS. REPS., Jan. 28, 2009, at 1, 16–17.

49. See STAFF OF S. COMM. ON FIN., *supra* note 22, at 16.

50. Zhang et al., *supra* note 13, at 1864 (reporting 3,640 ambulatory cases analyzed from June 2012 to June 2015, including 2,474 overlapping cases and 1,166 non-overlapping cases); Zygourakis et al., *supra* note 13, at 1090 (studying 1,219 inpatient procedures—828 designated as concurrent and 391 designated as non-concurrent—from January 2012 through December 2015); Yount et al., *supra* note 13 (reporting, from July 2011 to July 2013, total inpatient sample size at 6,120 with 2,551 procedures classified as “two rooms” and 3,569 procedures classified as “one room”); Hyder et al., *supra* note 13, at 642 (examining 36,074 total cases (14,326 overlapping and 21,748 non-overlapping) from January 2013 to September 2015). It is important to note that these studies analyze data spanning various timeframes from two years to four years, while the comparative inpatient and ambulatory surgery counts only account for one year. Thus, it is imperative to view these calculated percentages as rough values to put the amount of surgeries studied in perspective.

4. Existing Research is Insufficient in Terms of Sampling Surgical Specialties

Dividing data into surgical specialties further exposes an insufficient sample size. Some studies only focus on specific specialties, which include cardiothoracic surgery, neurosurgery, and ambulatory orthopedic surgery.⁵¹ On the other hand, research performed by the Mayo Clinic provides a broader reach in terms of specialty as its data covers cases of cardiovascular surgery, colon and rectal surgery, general surgery, gynecological surgery, neurosurgery, oral surgery, orthopedics, otorhinolaryngology, plastic surgery, reproductive surgery, thoracic surgery, trauma surgery, urology surgery, and vascular surgery.⁵²

While the Mayo Clinic is the only study to have included a broad range of specialties, the number of cases examined in some categories is so small that those cases appear insignificant when determining the risks or probability of risk of overlapping procedures at institutions nationwide. For instance, the Mayo Clinic only studied twenty-nine cases of reproductive surgery, only one of which was overlapping.⁵³ Further, urology surgeries studied totaled 1,875 with 630 overlapping and 1,245 non-overlapping.⁵⁴ In the absence of data on how often overlapping surgeries occur in the urology context, the number of urological surgeries studied at the Mayo Clinic only amounts to roughly 0.15% of nationwide urological surgeries.⁵⁵ Even cardiovascular surgeries performed at the Mayo Clinic and the University of Virginia, with one of the highest sample sizes of 5,611 cases, would only amount to roughly 0.075% of cardiovascular procedures nationwide.⁵⁶ So even when divided by specialty, procedures included in research are still far less than one percent of surgeries of that specialty nationwide.

51. See Yount et al., *supra* note 13; Zygourakis et al., *supra* note 13, at 1090; Zhang et al., *supra* note 13.

52. Hyder et al, *supra* note 13, at 642.

53. *Id.*

54. *Id.*

55. Here, 1,875 Mayo Clinic urology surgeries divided by 1,221,000 total urology surgeries in the United States equals 0.15%. See *id.*; CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 48. Once again, these studies analyze data spanning various timeframes, while the comparative U.S. urology surgery counts only account for one year. It is important to view these calculated percentages as rough values to put the amount of surgeries studied in perspective.

56. See Hyder et al., *supra* note 13, at 642 (studying 2,855 cardiovascular surgeries); Yount et al., *supra* note 13 (studying 1,378 cardiovascular surgeries); CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 48 (reporting 7,454,000 cardiovascular surgeries performed in the United States). Again, these studies analyze data spanning various timeframes, while the cardiovascular surgery counts only account for one year. It is appropriate to view these calculated percentages as rough values to put the amount of surgeries studied in perspective.

5. Existing Research Does Not Account for Riskier Patients

Another important factor to consider in the context of current research is the fact that the risks of surgical procedures do not apply equally to each patient. In fact, imagine the risks of a twelve-year-old patient undergoing a tonsillectomy compared to the risks of a seventy-year-old patient undergoing open heart surgery. Risks of mortality and complications are already much higher for the seventy-year-old patient due to her age and the nature of her surgery. Yet it is expected that these risks further increase, especially for the seventy-year-old patient, when the surgeon either leaves the operating room at non-critical portions (in an overlapping procedure) or perhaps even leaves the operating room at some critical portions (in a concurrent procedure). Current research has not yet directly examined the probability of risk overlapping procedures add to patients who are inherently riskier. In fact, the overlapping neurosurgery patients studied by UCSF were low-risk in that the overlapping surgery patient group “had significantly lower [American Society of Anesthesiologists] ASA class,⁵⁷ severity of illness, and risk of death than [the non-overlapping group]. Consistent with this finding, [concurrent] cases were more likely to be routine/elective admissions, as compared with emergency/urgent admissions.”⁵⁸ This study suggests that overlapping surgeries at UCSF are not—and perhaps should not be—performed on riskier patients. But where is the line drawn? How much risk does an overlapping procedure add when a patient’s case is inherently riskier? Answering these questions is one path for future studies to take.

B. *Potential Risks of Overlapping and Concurrent Surgeries*

It is only a matter of time until either *some* risk materializes, or we have a more expansive and supported conclusion that overlapping surgeries pose no significantly greater risk. Until then, there are certainly imaginable risks that would arise when a surgeon performs operations that overlap. For one, risk of complications and compromised patient safety increases when the primary attending surgeon is not present and delegates surgical responsibilities to surgeons, residents, or trainees with lesser or insufficient skill, expertise, and experience.⁵⁹ This situation can occur, for example, during an overlapping surgery when a primary attending surgeon delegates suturing to a resident so he

57. ASA class refers to the American Association of Anesthesiologists’ patient physical status classification system. The spectrum of classifications includes patients that are: (1) normal, (2) afflicted with a mild disease, (3) afflicted with a severe disease, (4) afflicted with a severe, constantly life-threatening disease, (5) moribund who cannot survive without surgery, and (6) brain-dead. *ASA Physical Status Classification System*, AM. SOC’Y OF ANESTHESIOLOGISTS (Oct. 14, 2014), <https://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system> (last visited Feb. 23, 2018).

58. Zygourakis et al., *supra* note 13, at 1091.

59. Mello & Livingston, *supra* note 2, at 1563.

or she can commence the critical portions of the next case. While a seemingly trivial task in the context of a complex operation, suturing, along with patient positioning, surgical draping, and incision, can have complications.⁶⁰ Poor suturing often results in wound complications which in turn lead to unnecessarily prolonged care and the possibility of adverse patient outcomes.⁶¹ While the risks of adverse patient outcomes when residents undertake non-critical surgical procedures (e.g., suturing) may be minimal and may be outweighed by the need for surgical efficiency, there is at least *some* identifiable risk present.

In the case of concurrent surgeries, when *critical* portions are delegated to a second surgeon or even a resident, risks are even more evident. Critical portions of an operation require skill, expertise, and experience as they are, by definition, crucial to the patient's surgical outcome.⁶² For example, in cardiac surgery, a non-primary surgeon working on a patient's heart without primary surgeon supervision is risky simply due to the fragile nature of the organ along with the lack of oversight by the primary surgeon.⁶³

Another opportunity for patient injury to materialize, as Mello and Livingston identify, occurs when the patient's condition escalates, and the supervising surgeon is preoccupied or unable to be reached.⁶⁴ Mello and Livingston state: "The risk is greatest when the second operation the surgeon is performing is difficult or out of the immediate vicinity."⁶⁵ In this scenario the surgeon has two options, both of which may jeopardize patient safety: (1) The surgeon leaves Patient 2 to return to Patient 1 to de-escalate the situation; or (2) The surgeon does not leave Patient 2 because he or she is currently engaged in the most critical aspects of the surgery and thus relies on Patient 1's surgical team to de-escalate the situation. In the first scenario, "[t]he supervising surgeon may be required to leave [Patient 2] at a critical time, thereby potentially causing more harm."⁶⁶ In the second scenario, Patient 1 may suffer additional harm if the surgical team is ill-equipped to de-escalate the situation. Thus, when a patient's condition escalates during surgery and the supervising surgeon is preoccupied with a second patient, either that patient or the second patient is more at risk for suffering harm due to the surgeon having to be in two places at once. Not only will one patient suffer greater risks because of a lack immediate medical attention, but it is likely that both patients in both scenarios will have

60. William L. Healy, Commentary, *Overlapping Surgery: Do the Right Thing*, 98 J. BONE JOINT SURGERY e101(1), e101(1) (2016).

61. *Id.*

62. STAFF OF S. FIN. COMM., *supra* note 22, at 9.

63. *See, e.g., id.* ("[S]ome organizations have stated that any work on the target organ should be designated as critical.").

64. Mello & Livingston, *supra* note 2, at 1563.

65. *Id.*

66. *Id.*

greater risks due to the increased stress the escalating situation places on the surgeon.

Additionally, performing surgeries that are simply more difficult, more complex, and more specialized in an overlapping fashion will add risk.⁶⁷ Delegating a complex surgery, even after critical portions are completed, poses a higher risk to the patient because of the increased risk for complications.⁶⁸ Furthermore, risks increase with more overlap.⁶⁹ While published studies to date only assess overlapping surgery time in terms of overlapping versus non-overlapping,⁷⁰ it is to be expected that a one-hour surgical overlap will have greater risk than an overlapping time of ten minutes. Overall, it is possible to identify some additional risk for overlapping surgeries, especially in instances where more important surgical responsibilities are delegated to potentially unsupervised residents or trainees, where the patient's condition escalates and the surgeon is preoccupied, when the surgeries performed are more complex by nature, and when there is more overlap between operations.

C. *Improving Future Research*

Even if one assumes that the studies outlined above are reliable, the amount of data studied is far below what is necessary to draw a meaningful conclusion about the risks of overlapping surgeries because current data represents less than one percent of hospitals, health systems, cases, and specialties nationwide. It is not simply the case that one, two, or a dozen more studies will be sufficient to meet the volume threshold. In reality, the number may be orders of magnitude greater.

Future researchers must ultimately clarify whether they are sampling overlapping surgeries or concurrent surgeries in order to generate meaningful risk profiles for both scheduling types. Because the primary attending surgeon often makes a discretionary judgment as to what aspects of the procedure are critical,⁷¹ many hospitals may not actually have a clear understanding of what category their procedures fall within. It is important that hospitals have clear policies on what constitutes a critical portion, like those facilities that outline it

67. *See id.*

68. *See The 10 Riskiest Medical Procedures*, HEALTHCARE BUS. & TECH. (May 4, 2012), <http://www.healthcarebusinesstech.com/the-10-riskiest-medical-procedures/> (last visited Feb. 23, 2018).

69. I. Glenn Cohen, *Concurrent Surgeries: Medical, Legal, and Ethical Issues*, THE PETRIE-FLOM CTR. FOR HEALTH & POL'Y, BIOTECHNOLOGY, & BIOETHICS AT HARV. L. SCH. (Oct. 27, 2016), <https://vimeo.com/189785258#t=29m01s> (last visited Feb. 25, 2018).

70. *See, e.g.,* Zygorakis et al., *supra* note 13, at 1090; Hyder et al., *supra* note 13, at 639; Zhang et al., *supra* note 13, at 1860.

71. *See* Barker, *supra* note 40, at 1086; Am. Coll. of Surgeons, *supra* note 8, at 26; STAFF OF S. FIN. COMM., *supra* note 22, at 9; CTRS. FOR MEDICARE & MEDICAID SERVS., *supra* note 29, § 100.1.2(A)(2).

in their Current Procedural Terminology codes.⁷² On the other hand, institutions that have discretionary determination of critical portions of surgery should report such uncertainties in research and work towards greater standardization.

Future study into the potential risks of concurrent and overlapping surgeries is necessary to capture a larger sample of health systems, hospitals, cases, and surgical specialties. Further study is particularly important to gain an improved understanding of any risks present in many different contexts, including investigation of riskier patient populations and amount of surgical overlap.

While this article argues that existing data is incomplete and encourages more studies, the ultimate purpose of this article is to discuss how the law should handle overlapping and concurrent surgical practices in the meantime. In other words, this article argues that the law should afford protection to individual patients when there is unknown but imaginable risk and unknown but imaginable probability of certain kinds of risk.

V. THE ROLE OF INFORMED CONSENT IN OVERLAPPING AND CONCURRENT SURGERIES

For a patient to successfully argue breach of informed consent, there must be harm that arises from an undisclosed risk.⁷³ In the context of overlapping and concurrent surgeries where the risk of harm is variably quantified, how can informed consent protect patients? This section proposes that materiality not only can but should encompass overlapping and concurrent surgeries' ill-defined risks of harm. It further reasons that the imaginable risks of overlapping procedures are risks inherent to the procedure which require disclosure, rather than physician-specific risks which generally do not require disclosure. Even if the risks are deemed to be physician-specific, there is still an argument that the practice warrants disclosure through the use of existing precedent. Overall, the law can and should protect patients even when the risks of overlapping and concurrent procedures are at present vaguely outlined.

A. *The Legal and Ethical Framework of the Doctrine of Informed Consent*

Historically, informed consent was solely framed as a legal cause of action for battery to protect patients from unwanted bodily contact.⁷⁴ In other words, if

72. STAFF OF S. FIN. COMM., *supra* note 22, at 9 (reviewing hospital policies as to whether they define the "critical portions" of the surgery and finding that "one hospital identified the critical portions of over 1,000 Current Procedural Terminology (CPT®) codes"; for example, under CPT 27134 for "revision joint total hip both components," critical portions included "finalizing bone cuts/bone preparation, implant trailing and final placement of implants").

73. *See Canterbury v. Spence*, 464 F.2d 772, 790 (D.C. Cir. 1972).

74. Susan O. Scheutzow, *Patient's Rights Issues*, in HEALTH LAW PRACTICE GUIDE § 11.7 (Am. Health Lawyers Ass'n ed., 2017), Westlaw (database updated Nov. 2017); BARRY R. FURROW ET AL., HEALTH LAW: CASES, MATERIALS AND PROBLEMS 206 (7th ed. 2013); *see also*, e.g., *Schloendorff v. Soc'y of N.Y. Hosp.*, 105 N.E. 92, 93 (N.Y. 1914) (Justice Cardozo

no consent was given, any medical treatment provided by a physician would qualify as “unconsented touching.”⁷⁵ However, since 1957, the law has shifted towards a negligent theory of liability for informed consent actions.⁷⁶ Thus, for a patient to claim a breach of informed consent, he or she must prove the following elements: (1) a specific, material risk of the surgery was not disclosed to the patient, (2) in not disclosing this risk, the physician violated the applicable standard of disclosure, (3) the undisclosed risk materialized and caused harm, and (4) the inadequate disclosure caused the patient’s injury⁷⁷ by causing the patient to consent to treatment.⁷⁸ Within this claim, physicians are only required to disclose “material” risks.⁷⁹ Yet the standard of disclosure varies amongst the states, with twenty-five states and the District of Columbia requiring physicians to disclose information that a reasonable patient would be expected to be told during the decision-making process, twenty-three states requiring physicians to disclose information that reasonably prudent physicians would provide in similar circumstances, and the remaining two states using a hybrid approach.⁸⁰

The disclosure requirements of informed consent not only stem from the bioethical principles of individual autonomy and self-determination,⁸¹ but also

articulating that “[e]very human being of adult years and sound mind has a right to determine what shall be done with his own body; and a surgeon who performs an operation without his patient’s consent commits an assault, for which he is liable in damages”); *Mohr v. Williams*, 104 N.W. 12, 13 (Minn. 1905) (“[I]f the operation was not authorized by the express or implied consent of plaintiff, it was wrongful and unlawful, and constituted, in law, an assault and battery.”).

75. Scheutzow, *supra* note 74, § 11.7.

76. *Salgo v. Leland Stanford Jr. Univ. Bd. of Trs.*, 317 P.2d 170, 175–181 (Cal. Ct. App. 1957) (noting that “[a] physician violates his duty to his patient and subjects himself to liability if he withholds any facts which are necessary to form the basis of an intelligent consent by the patient to the proposed treatment” and describing two courses of action for the doctor’s disclosure: (1) “explain[ing] to the patient every risk attendant upon any surgical procedure or operation, no matter how remote,” and (2) “recogniz[ing] that each patient presents a separate problem, that the patient’s mental and emotional condition is important and in certain cases may be crucial, and that in discussing the element of risk a certain amount of discretion must be employed consistent with the full disclosure of facts necessary to an informed consent”).

77. BARRY R. FURROW ET AL., *HEALTH LAW* 140 (3d ed. 2000); Robin Fretwell Wilson, *The Promise of Informed Consent*, in *THE OXFORD HANDBOOK OF U.S. HEALTH LAW* 217 (I. Glenn Cohen et al. eds., 2017); *Canterbury*, 464 F.2d at 790.

78. Robert Gatter, *The Mysterious Survival of the Policy Against Informed Consent Liability for Hospitals*, 81 NOTRE DAME L. REV. 1203, 1211 (2006).

79. *Canterbury*, 464 F.2d at 786–87.

80. Scheutzow, *supra* note 4, § 11.7; David M. Studdert et al., *Geographic Variation in Informed Consent Law: Two Standards for Disclosure of Treatment Risks*, 4 J. EMPIRICAL LEGAL STUD. 103, 105, 106 fig. 1 (2007) (“Colorado and Georgia are classified as ‘hybrid’ because their laws blend aspects of the patient and professional standards, without expressing a clear preference for either.”).

81. FURROW ET AL., *supra* note 77, at 206.

from the trust relationship between physicians and their patients.⁸² Courts note that because patients are vulnerable parties in treatment decision making, patients depend on physicians for expert advice in choosing the best treatment option.⁸³ Therefore, courts often interpret the physician-patient relationship as a fiduciary one where the patient “has an abject dependence upon and trust in his physician for information upon which he relies during the decisional process, thus raising an obligation in the physician that transcends arms-length transactions.”⁸⁴ The physician’s duty to disclose to the patient the diagnosis, tests, alternatives, risks, and the nature and purpose of recommended medical interventions⁸⁵ is grounded in fiduciary principles that promote informed decision making and cultivate trust.⁸⁶ However, fiduciary principles, while at the foundation of informed consent law, are limited in application as they do not resolve subsidiary informed consent issues like the standard of disclosure, the establishment of causation, and the requirements for proving injury.⁸⁷

When patients are adequately informed of the risks and benefits of a procedure and give effective consent, the party responsible for any adverse consequences shifts from being the physician to being the patient.⁸⁸ In a way, the informed consent doctrine is closely tied to assumption of the risk in that if patients are informed of the risks and provide consent to the procedure regardless of such risks, they assume those risks.⁸⁹ However, some risks, as a matter of public policy, cannot be pushed onto the vulnerable party. For example, a surgeon cannot disclose that in the course of treatment he or she may act in a grossly negligent manner and expect the patient to assume that risk.⁹⁰

Another area where courts are reluctant to expand informed consent protections is in physician-specific risk disclosures.⁹¹ Whether the risk of

82. See *Canterbury*, 464 F.2d at 782 (“The patient’s reliance upon the physician is a trust of the kind which traditionally has exacted obligations beyond those associated with arms-length transactions.”); see also, e.g., Mark A. Hall, *Law, Medicine, and Trust*, 55 STAN. L. REV. 463, 489 (2002) (providing an illustration of doctor-patient trust within informed consent law).

83. See, e.g., *Cobbs v. Grant*, 502 P.2d 1, 3 (Cal. 1972) (“A medical doctor, being the expert, appreciates the risks inherent in the procedure he is prescribing, the risks of a decision not to undergo the treatment, and the probability of a successful outcome of the treatment.”).

84. *Cobbs*, 502 P.2d at 9.

85. FURROW ET AL., *supra* note 77, at 217–18.

86. Gatter, *supra* note 78, at 1264.

87. Hall, *supra* note 822, at 490.

88. See Stephen D. Sugarman, The Monsanto Lecture, *Assumption of Risk*, 31 VAL. U. L. REV. 833, 839 (1997).

89. See *Morrison v. MacNamara*, 407 A.2d 555, 566 (D.C. 1979) (The assumption of the risk defense “operates in much the same way as the doctrine of informed consent, thereby relieving the party charged with negligence from any liability from otherwise prohibited conduct.”).

90. See *id.* at 567–68 (“Thus, save for exceptional circumstances, a patient cannot assume the risk of negligent treatment.”).

91. Bal & Choma, *supra* note 15, at 1346.

overlapping surgery constitutes (1) a physician-specific risk or (2) a risk inherent to the procedure could have significant implications for a breach of informed consent action. A physician's failure to disclose risks inherent to the procedure constitutes a breach of informed consent so long as the patient establishes all other elements.⁹² Conversely, courts are reluctant to admit physician-specific variables into evidence in informed consent litigation.⁹³ For example, disclosures of physician-specific variables such as experience, qualifications, and skill generally are not admissible as evidence in court.⁹⁴ On the other hand, in some jurisdictions, under narrow circumstances, a physician's health status, including drug addiction and alcohol abuse, is admissible only when the physician's health is directly related to increased patient risk.⁹⁵ The policy underlying this reluctance to require physician-specific disclosures is one of medical efficiency and physician privacy.⁹⁶ When physicians are preoccupied with extensive disclosures to protect themselves from liability, they may be distracted from practicing good medicine.⁹⁷ Further, physician-specific disclosures may marginally affect a patient's treatment decision in comparison to the detrimental effect of mandated disclosure on physician privacy.⁹⁸ Yet the widespread practice of refusing to require physician-specific disclosures seems to contravene the fiduciary core of informed consent as a process of open communication and trust between the expert physician and the vulnerable patient.

B. The Informed Consent Argument of Overlapping Surgeries and Concurrent Surgeries

In informed consent actions involving overlapping and concurrent surgeries, this article proposes that materiality not only can but should encompass the yet ill-defined risk of harm. For the sake of bolstering this proposal, imagine the surgeon's argument that, because data does not show an increased risk associated with overlapping surgeries and because the law does not require disclosure of non-material risks, the patient cannot claim breach of informed

92. *Blanchard v. Kellum*, 975 S.W.2d 522, 524 (Tenn. 1998).

93. *See* Bal & Choma, *supra* note 15, at 1353.

94. *Id.* *But see* *Johnson ex rel. Adler v. Kokemoor*, 545 N.W.2d 495, 507, 510 (Wis. 1996) (demonstrating an exception to this rule in holding that evidence of Dr. Kokemoor's lack of experience in clipping an aneurysm was admissible because there was a higher risk of paralysis or death when a relatively inexperienced surgeon operated as compared to a more experienced surgeon).

95. Bal & Choma, *supra* note 15, at 1349.

96. *Id.* at 1355; Richard A. Heinemann, Note, *Pushing the Limits of Informed Consent: Johnson v. Kokemoor and Physician-Specific Disclosure*, 1997 WIS. L. REV. 1079, 1116 (1997).

97. Bal & Choma, *supra* note 15, at 1355.

98. *See* Heinemann, *supra* note 96, at 1116–17; Megan Lee, Note, *Defining the Limits of a Physician's Duty to Disclose in Massachusetts*, 11 SUFFOLK J. TRIAL & APP. ADV. 139, 164 (2006).

consent, the case compels summary judgment, and the surgeon cannot be held liable. To counter the surgeon's argument, the patient has one primary avenue—to demonstrate there is a question of material fact.

First, as argued in Part IV, current data on the risks of overlapping surgeries is incomplete as it does not provide a sufficient sample of institutions, cases, and surgical specialties. Furthermore, there are certainly imaginable risks that would occur when the primary attending surgeon is not in the operating room for the entirety of the procedure. Together, the insufficient data and the foreseeable risks establish a question of material fact which requires resolution from a factfinder. Moreover, a reasonable person would *want* to know the surgeon performing the operation, whether the primary surgeon will be present for the entire procedure, which parts the primary surgeon will delegate, and to whom the primary surgeon will delegate. In fact, when asked if they would consent to an operation performed by a non-supervised resident, only 18.2% of patients consented.⁹⁹ Ultimately, as more information surfaces, if it echoes existing trends towards no significance in increased risk for overlapping surgeries, materiality would be more difficult to prove. Yet the scope of this article is on how to handle the ill-defined risks of overlapping surgeries under the informed consent doctrine in the meantime. Thus, if there is a lack of concrete evidence, rather than letting the patient be exposed to the potential risks of overlapping surgery and having those risks materialize, it is best at the very least to allow a factfinder to evaluate the evidence and materiality, which in turn would encourage disclosures that prompt surgeon-patient discussions of the contours of overlapping procedures.

While this article has addressed that a factfinder should be *presented* with the facts of the case and risk data, how should the factfinder *handle* the risks they are provided? A court should deem the risks (ill-defined, imaginable, and real) of overlapping and concurrent procedures as more akin to risks inherent to the procedure, which require disclosure, rather than as physician-specific risks. Yet if a court cannot find for such risks being inherent to the procedure, there is still precedent for disclosing this type of physician-specific risk, even though most state courts would not find in favor of materiality. For the purpose of defending this stance, a surgeon may argue the opposite, in that overlapping and concurrent procedures are more akin to physician-specific risks which courts, in most states, conclude do not require disclosure.¹⁰⁰ Specifically, a surgeon may argue that the risks of overlapping procedures are due to the way the surgeon is spending time and not a risk inherent to the surgery itself. Then again, a surgeon may also argue that the risks of delegating a critical or non-critical portion of a procedure to a resident or trainee in order to commence a second surgery is

99. Porta et al., *supra* note 11, at 59.

100. See Bal & Choma, *supra* note 15, at 1354.

actually a physician-specific risk due to the reduced levels of experience and training of the resident or trainee.

The risks of overlapping surgeries are risks of the procedure and not risks specific to the physician because they arise from the way the surgery *proceeds*—the primary attending surgeon finishes the critical portions of one patient, he or she designates duties to another surgeon, resident, or trainee, and he or she moves on to critical portions of the second procedure.¹⁰¹ In other words, the procedure of overlapping surgeries has risks as a *whole*, independent of the individual characteristics of the primary attending physician or the resident such as their experience, health, disability-status, qualifications, disciplinary history, depression, or alcoholism.¹⁰² In other words, the risks are not dependent on *which* surgeon performs an overlapping procedure, but rather the risks arise from the category of the procedure whereby a surgeon lacks supervision of the entire surgery or is unable to be contacted in the case of an escalated situation.

Case law demonstrates that physician-specific risk disclosures are generally not required, but complete reliance on this case law is misplaced in the context of overlapping surgery risks. One such case is *Prissel v. Physicians Insurance Co. of Wisconsin*, where the Supreme Court of Wisconsin held that there was no obligation for the supervising surgeon to disclose a physician assistant's participation in the patient's bypass surgery in the informed consent process.¹⁰³ Further, in *Henry v. Bronx Lebanon Medical Center* when a resident performed a delivery under supervision, the New York Appellate Division of the Supreme Court noted that "it was the custom at that hospital for all the obstetricians to allow residents in their training . . . to do complicated deliveries [The plaintiff,] by going to Bronx Lebanon, consented to the customs and practices of that hospital."¹⁰⁴ But the circumstances surrounding overlapping and concurrent surgeries are better matched with *Johnson v. Kokemoor*, which held a physician-specific risk as material and therefore, admissible in court as evidence.¹⁰⁵

In *Kokemoor*, a patient diagnosed with an aneurysm underwent surgery, which resulted in paralysis.¹⁰⁶ In previous discussions, the surgeon disclosed that the surgery presented "a two percent risk of death or serious impairment."¹⁰⁷

101. See Mello & Livingston, *supra* note 2, at 1563.

102. See Bal & Choma, *supra* note 15, at 1347.

103. *Prissel v. Physicians Ins. Co. of Wis.*, No. 02-1729, 2003 WL 22998133, at *7, *9 (Wis. Ct. App. Dec. 23, 2003) ("We do not hold that evidence of restrictions on licenses or privileges need never be disclosed. We simply conclude that the record before us fails to show that the evidence offered in support of Prissel's informed consent claim demonstrated increased risk [from the use of a physician's assistant] within the meaning of *Kokemoor*.").

104. *Henry v. Bronx Lebanon Med. Ctr.*, 385 N.Y.S.2d 772, 775 (N.Y. App. Div. 1976).

105. *Johnson ex rel. Adler v. Kokemoor*, 545 N.W.2d 495, 507, 510 (Wis. 1996).

106. *Id.* at 499.

107. *Id.*

Expert evidence put forth by the plaintiff, however, showed that “the morbidity and mortality rate for basilar bifurcation aneurysm operations performed by one with the defendant’s *relatively limited* experience would be between twenty and thirty percent, and ‘closer to the thirty percent range.’”¹⁰⁸ Ultimately the court held that “when different physicians have substantially different success rates with the same procedure and a reasonable person in the patient’s position would consider such information material, the circuit court may admit this statistical evidence.”¹⁰⁹

In the context of overlapping surgeries, such procedures are more analogous to the circumstances of *Kokemoor* than the circumstances of either *Prissel* or *Henry*. Like in *Kokemoor*, where the success rate correlates with experience,¹¹⁰ here in situations of overlapping surgeries, when the primary surgeon leaves the room, the expertise in the operating room is not the same and, therefore, the success rate will likely not be the same. Overlapping procedures can be distinguished from the cases of *Prissel* and *Henry* simply on the basis that, in those cases, residents were under direct supervision of a teaching physician or surgeon.¹¹¹ In contrast, in standard overlapping procedures, trainees or residents may be delegated surgical tasks to complete on their own by the primary attending surgeon who is not directly supervising nor is in the immediate vicinity.¹¹² Under a *Kokemoor* analysis of overlapping surgeries, evidence of expertise within the operating room dropping and the risks associated would be permitted as evidence in court for breach of informed consent claims.¹¹³ Similarly, in the concurrent or overlapping context, when a primary attending surgeon leaves the operating room, it is expected that the skill and expertise within the operating room will drop.

Thus, if courts classify the risks of overlapping and concurrent surgeries as physician-specific risks, patients may be successful in arguing the similarities between the facts of overlapping and concurrent operations and the facts of *Kokemoor*. More likely, however, the risks of overlapping and concurrent procedures are risks inherent to the procedure, which always require disclosure. However, when the risks are not well substantiated, as is the current case, the materiality analysis should include these ill-defined risks and at the very least, there is a question of material fact which requires resolution from a fact finder.

108. *Id.* (emphasis added).

109. *Id.* at 507.

110. *See Kokemoor*, 545 N.W.2d at 507.

111. *See Prissel v. Physicians Ins. Co. of Wis.*, No. 02-1729, 2003 WL 22998133, at *7, *9 (Wis. Ct. App. Dec. 23, 2003); *Henry v. Bronx Lebanon Med. Ctr.*, 385 N.Y.S.2d 772, 775 (N.Y. App. Div. 1976).

112. *See Mello & Livingston*, *supra* note 2, at 1563–64.

113. *See Kokemoor*, 545 N.W.2d at 507. That is, if data is able to show definite risks.

VI. THE TRUST ARGUMENT FOR OVERLAPPING AND CONCURRENT SURGERY DISCLOSURES

As a matter of public policy, we want the law to reinforce the physician-patient trust relationship. While informed consent law can and should be interpreted to encompass the known and unknown risks of overlapping and concurrent surgeries, there is another potential avenue patients can pursue under the law: namely, negligent infliction of emotional distress.

It is possible that patients who are emotionally distraught because they were not told the truth that the surgeon would not be with them during the entire operation only to find out later may succeed in a negligent infliction of emotional distress claim.¹¹⁴ In these cases, the patient suffers no physical harm due to the overlapping or concurrent procedure but rather suffers dignitary harm for which the informed consent cause of action cannot provide relief.¹¹⁵ Here, the law reinforces the physician-patient trust relationship because it affords patient protection for violations of trust that result in emotional harm. However, one caveat is that the circumstances resulting in emotional harm to the patient must be particularly egregious.¹¹⁶ Like in *Strasel v. Seven Hills OB-GYN Associates*, where the patient suffered panic attacks from fear of harm to her baby from a dilatation and curettage procedure when the baby suffered no adverse consequences was able to receive damages for negligent infliction of emotional distress,¹¹⁷ here a similar situation in the context of concurrent or overlapping surgeries can be imagined. For example, it is possible that a vulnerable and sensitive patient would suffer severe mental anguish from the fear of harm and risks to herself as a result of her trusted surgeon not being with her during significant portions of her surgery and when no such risks actually manifest. To further illustrate, perhaps the patient suffers panic attacks similar to the patient in *Strasel*¹¹⁸ as a result of learning and living with the fact that the expert surgeon she had placed her trust in had delegated out critical aspects of her procedure to another surgeon or resident without her knowledge and consent and with the possibility that adverse risk could occur although no such risks actually manifest. While negligent infliction of emotional distress actions are narrow in scope, they still provide a *possible* avenue for patient protection.

Another way patients may obtain candid disclosure and engage in dialogue concerning the overlapping or concurrent nature of their procedure is through institutional disclosure policies on the basis that the benefits of trust outweigh the costs of disclosure. As patients lay unconscious and vulnerable on the

114. See FURROW ET AL., *supra* note 77, at 336.

115. See *id.*

116. *Id.*

117. *Strasel v. Seven Hills OB-GYN Assocs.*, 170 Ohio App. 3d 98, 2007-Ohio-171, 866 N.E.2d 48, at ¶ 22.

118. *Id.* ¶¶ 8, 9.

operating room table, they trust the surgeon with what is most important to them—their life. There are documented benefits to reinforcing trust between the physician and the patient.¹¹⁹ Patients who trust their health care provider are more likely to follow their doctors' orders, which often results in faster recovery and healing.¹²⁰ In addition, trusting patients are less likely to seek second opinions or engage in disputes with their physician or plan, which, on its face, appears to reduce transaction costs.¹²¹ One way to harness the benefits of trust is through disclosure in the informed consent process.

Even if it is concluded that overlapping surgeries pose no risk of harm to the patient, an institutional policy for disclosure would promote openness and trust within the physician-patient relationship and would push physicians towards disclosure in every case. In fact, there are institutional policies in place that are similar in kind to this proposal. For example, most health care organizations, encouraged by CMS' Interpretive Guidelines, have informed consent disclosure policies that require patients to be informed of surgical resident participation.¹²² In these cases, it is unclear as to how much a resident's participation contributes to increased risk of complications.¹²³ For instance, surgical residents could be capable of performing appendectomies with no added risk, yet hospital policies require disclosure of resident participation. Like the risks of resident participation, as argued in Part IV, at the moment, the risks of overlapping and concurrent surgeries are not well-defined. Using similar logic, health care organizations should look to establishing policies requiring overlapping and concurrent disclosures to foster trust and its benefits.

However, one might counter that an open dialogue between a surgeon and patient on overlapping and concurrent procedures actually undermines trust because it is likely to make the patient overly worried about the procedure and thus more likely to opt out. Remarkably, however, studies involving financial conflict of interest disclosures in clinical research show that trust, in fact, is not undermined. According to research findings by Weinfurt et al., in cases where a clinical researcher discloses his or her financial interest in the outcome, “the disclosures tested so far do not undermine [patient] trust and may even help to

119. Mark A. Hall et al., *Trust in Physicians and Medical Institutions: What Is It, Can It Be Measured, and Does It Matter?*, 79 MILBANK Q. 613, 613 (2001).

120. *See id.* at 617.

121. *See id.* at 629.

122. CTRS. FOR MEDICARE & MEDICAID SERVS., STATE OPERATIONS MANUAL: APPENDIX A - SURVEY PROTOCOL, REGULATIONS AND INTERPRETIVE GUIDELINES FOR HOSPITALS § 482.51(b)(2) (2007), https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_a_hospitals.pdf (outlining an example of a well-designed informed consent process that includes “[w]hether physicians other than the operating practitioner, including but not limited to residents, will be performing important tasks related to the surgery, in accordance with the hospital's policies”).

123. Chrissy McAlister, *Breaking the Silence of the Switch – Increasing Transparency About Trainee Participation in Surgery*, 372 NEW ENG. J. MED. 2477, 2478 (2015).

improve or sustain trust to a moderate extent.”¹²⁴ Even though there may be some inefficiencies to disclosure, the fiduciary, trust-based relationship between the expert surgeon and the vulnerable patient demands open and honest communication and shared decision making.

VII. CONCLUSION

While the *Boston Globe*'s report on Tony Meng's story exposed the practices of concurrent and overlapping surgeries, it also provides a suitable framework to analyze the role of informed consent in dealing with risk associated with concurrent and overlapping surgeries. In situations where the public conscience is shocked, how are patients afforded protection under the law? How can patients become empowered decision makers when they are inherently vulnerable?

As discussed, the risks to a patient from an overlapping or concurrent procedure are inexact. While existing research shows trends towards overlapping and concurrent surgeries posing no patient risk, the sample size may not be substantial enough to draw conclusions or make generalizations. More research on the safety of the practice is needed and will likely be provided in the coming years. In the meantime, patients may find relief under breach of informed consent actions or possibly even negligent infliction of emotional distress actions.

Overall, health care should trend towards patient protection, guided by the trust and fiduciary principles at the core of the surgeon-patient relationship. There are both tangible and intangible benefits to surgeon-patient relationships built on trust. Certainly, in time, health care institutions will recognize that the benefits of trust outweigh the inefficiencies of disclosure. In doing so, health care institutions could be the first to create informed consent disclosure requirements for overlapping and concurrent surgeries. Ultimately, patients simply want to be told how a scary, maybe even life-threatening procedure will proceed. Hiding the practice of concurrent and overlapping surgeries has diminished patient trust in surgeons. Disclosure requirements are necessary for truly informed consent.

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124. Kevin P. Weinfurt et al., *Disclosure of Financial Relationships to Participants in Clinical Research*, 361 *NEW ENG. J. MED.* 916, 918 (2009).

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