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Patient Awareness during General Anesthesia: A Legal Guide

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COMMENTS

PATIENT AWARENESS DURING GENERAL ANESTHESIA: A LEGAL GUIDE

> The surgeon . . . made an incision [and] I could hear my skin tearing like a piece of paper. [I]t felt like someone had stuck a blow torch in my stomach.[1]

Imagine being in surgery when the surgeon believes you are fully anesthetized. In reality, however, you are completely aware and alert. Your mind is racing. You fear that since you can hear the surgeon's conversations and feel his fingers on your body, no doubt you will feel the incisions as well. In addition, you feel like you are suffocating because the respirator does not let you breathe as much air as you want.

You try to tell the surgeon that you are awake, but to no avail. You are unable to move your hands or legs, you cannot cry, blink, or give any indication that you are awake. You become terrified, because you assume something must be terribly wrong.

You then hear the surgeon ask for a scalpel. You try to beg and scream for him to stop but no sound comes out of your mouth. The surgeon finally makes the incision and you feel like you are going to explode. The pain is inconceivable. You want to die rather than continue with the operation. You feel violated and deceived.

After the operation, you confront the surgeon and anesthesiologist to tell them about the horror you experienced. Instead of being sympathetic, however, they refuse to believe you and insist that you merely experienced a bad dream as a result of the anesthetic agents that were administered. To your dismay, they attempt to assure you that it was just not possible for you to be aware during the operation. You feel helpless and alone because no one seems to believe you.

A short time later, you begin experiencing frequent and recurrent nightmares, re-living the operation over and over again. You can no

1. Jeanette Tracy, *Awareness in the Operating Room: A Patient's View*, *in* MEMORY AND AWARENESS IN ANESTHESIA 349, 350 (Peter S. Sebel ed., 1993) (reflecting on her painful experience during a hernia repair operation in 1990).

longer do the simplest tasks, such as reading, working, or writing. Life never seems to be the same.

The description above[2] is common among patients who suffer "awareness"[3] during general anesthesia. It is estimated that about 0.2 to 1% of all persons undergoing general anesthesia experience "awareness" during surgery.[4] In the United States, this may affect as many as thirty thousand persons annually.[5]

This Comment will focus on the frightening prospect of patient "awareness" during surgery, and will suggest some legal pathways a lawyer can take on behalf of a client who experiences this phenomenon. First, anesthesiology will be defined. Second, the impact "awareness" may have on patients will be explored. Third, the possible causes of patient "awareness" will be discussed. Fourth, anesthesiologists' duties and obligations to their patients when conducting surgery will be examined. Fifth, theories of recovery for damages caused by awareness will be discussed. Finally, this Comment will consider ways in which anesthesiologists can protect themselves from lawsuits before, during, and after operations. This Comment concludes that the continued threat of legal liability will ensure the best possible care for patients, thereby reducing the likelihood of patient awareness and increasing the overall safety of patients.

I. ANESTHESIOLOGY DEFINED

Anesthesiology is defined as the "practice of medicine dealing with . . . the management of procedures for rendering a patient insensible to pain and emotional stress during surgical, obstetrical and certain [other] medical procedures."[6]

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2. The scenario described is adapted from Jeanette Tracy's personal account of her experience during surgery for a hernia removal. *Id.* at 349-53; Interview with Jeanette Tracy, "awareness" victim, in Fairfax, Va. (Oct. 15, 1995); *Dateline NBC: Rude Awakening* (NBC television broadcast, Oct. 27, 1996).

3. "Awareness" has been defined as the "quality or state of being aware; i.e., watchful, vigilant, informed, cognizant, or conscious." M. M. Ghoneim & Robert I. Block, *Learning and Consciousness During General Anesthesia*, 76 ANESTHESIOLOGY 279, 280 (1992).

4. Jane Stevens, *Rude Awakening: Imagine the Horror of Waking Up During Surgery and Feeling Every Move. It Happens.*, L.A. TIMES, Sept. 13, 1994, at E3; Ghoneim and Block, *supra* note 3, at 282; Stephen F. Dierdorf, *Awareness During Anesthesia*, 14 ANESTHESIOLOGY CLINICS N. AM. 369, 371 (1996).

5. Charles McLeskey & Alan Aitkenhead, *Prevention of Awareness*, AM. SOC'Y ANESTHESIOLOGISTS NEWSL., Oct. 1994, at 16, 16.

6. Gerald J. Todaro, *Anesthesia Malpractice: What Are the Anesthesiologist's Duties?*, TRIAL, May 1986, at 32. Other definitions of anesthesiology include: (1) the support of life

General anesthesia, the practice of putting a patient to sleep during surgery, can be induced either by administering gaseous agents orally or by injecting anesthetic agents intravenously.[7] The goal of general anesthesia is to render the patient unconscious, and free from pain.[8] Muscle relaxants are often used in conjunction with the anesthetic agents for three reasons:[9] first, to relax the patient's muscles so that the surgeon can cut tissue more easily;[10] second, to ensure that the patient does not move during the operation;[11] and third, to block pain so that as the patient sleeps, the body does not produce stress hormones to stimulate the patient's nerves.[12] In effect, the muscle relaxants render the patient completely paralyzed. Because this paralysis often affects the patient's respiratory muscles as well, the patient must be supplied with oxygen artificially through endotracheal intubation.[13]

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functions under the stress of anesthetic and surgical manipulations, *id.*; and, (2) loss of the ability to feel pain, caused by administration of a drug or by other medical interventions. DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 74 (28th ed. 1994). There are two main types of anesthesia: regional (which allows a localized area of the body to be operated on without necessitating loss of consciousness), and general (which induces the patient to lose consciousness while the operation is performed). *See* Gerald Todaro & Frank Todaro, *Anesthesia Malpractice*, 6 AM. JUR. PROOF OF FACTS 3 1, 18-19 (1989). *See* James Bartimus & Marilyn Dymer, *Evaluating Anesthesia Negligence Claims*, TRIAL, May 1992, at 38, 40.

7. Bartimus & Dymer, *supra* note 6, at 40. General anesthesia can be induced by administering intravenously a rapidly acting barbiturate, or by administering a mixture of anesthetic and oxygen through inhalation. Todaro & Todaro, *supra* note 6, at 17. "Most often both [oral and intravenous agents] are used, along with narcotics for pain relief and muscle relaxants." Bartimus and Dymer, *supra* note 6, at 40. After the initial induction, the anesthetic level is normally maintained with a mixture of nitrous oxide gas and oxygen at a ratio of 70% nitrous oxide to 30% oxygen. *Id.* If an inadequate amount of oxygen is administered, the patient's blood can become insufficiently oxygenated (hypoxic) which, if not corrected, can lead to severe brain damage or even death. Todaro & Todaro, *supra* note 6, at 18; William H. L. Dornette, *Some Problems Related to Specific Agents and Techniques*, *in* LEGAL ISSUES IN ANESTHESIA PRACTICE 159, 162 (William H. L. Dornette ed., 1991). Nitrous oxide is a good pain reliever, but a weak anesthetic; it is therefore supplemented with more potent anesthetic gases to induce a deeper sleep. Bartimus & Dymer, *supra* note 6, at 40.

8. *See* A. R. Aitkenhead, *Editorial: Awareness During Anaesthesia: What Should the Patient be Told?*, 45 ANAESTHESIA 351, 351 (1990).

9. Judy Foreman, *This Is No Time to Wake Up, But Many Do*, BOSTON GLOBE, May 1, 1995, at 29.

10. *Id.*

11. *See* Bartimus & Dymer, *supra* note 6, at 40.

12. Foreman, *supra* note 9, at 29.

13. Bartimus & Dymer, *supra* note 6, at 40. During intubation, a tube is passed through the patient's windpipe to his lungs. *Id.* The primary purpose for it "is to prevent the unconscious patient from inhaling vomit, blood, mucous, or saliva into the lungs." *Id.*

II. Impact of Awareness on the Unsuspecting Patient

A patient undergoing general anesthesia[14] expects to be unconscious, free from pain and unpleasant sensations during the surgical procedure.[15] When this does not occur, the patient may become extremely distressed.[16] Apart from the intense pain that may be experienced during the operation, the victim may also become severely traumatized due to the lack of control over the procedure.[17] This lack of control can be extremely frightening when lying passively on the operating table, believing things must be terribly wrong.[18] In addition, the patient's inability to move or communicate with the surgeon because of the muscle relaxants only adds to the terror.[19]

With complete failure of the anesthesia, the patient may know where he is and what is happening, hear conversations, and feel pain.[20] It is also possible, though less common, for the patient to recall seeing the opera-

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14. General anesthesia usually involves the following four components:

> (1) a mild tranquilizer to make the patient forget the surgical experience; (2) narcotics to block the pain; (3) an anesthetic like Sodium Pentothal or Propofol, to make them lose consciousness; and (4) an agent that paralyzes patients so that they will not move during the operation when the surgeon severely stimulates their nerves.

Stevens, *supra* note 4, at E4.

15. Aitkenhead, *supra* note 8, at 351.

16. *See* N. Moerman et. al., *Awareness and Recall during General Anesthesia*, 79 Anesthesiology 454, 462 (1993).

In a study of 26 patients who experienced awareness during general anesthesia, the authors reached the following conclusion:

> The actual awakening during an anesthetic does not seem to be the most distressing experience for patients. . . . [B]ut when they found themselves "unable to move their arms and legs or open their mouths," without being able to communicate, this resulted in great anxiety and panic. Furthermore, the inability to interpret what was going on, and the sensation that "something must be completely wrong," contributed to the anxiety. Some patients reported fears of impending death, but others denied such feelings and said that they had been far more concerned about experiencing pain.

Id.

17. *Id.*

18. Ghoneim & Block, *supra* note 3, at 289.

19. *Id.*

20. J.E. Utting, *Awareness: Clinical Aspects*, *in* Consciousness, Awareness and Pain in General Anesthesia 171, 172-173 (M. Rosen & J.N. Lunn eds., 1987); *see also* Christopher Heneghan, *Clinical and Medicolegal Aspects of Conscious Awareness During Anesthesia*, 31 Int'l Anesthesiology Clinics 1, 2 (1993) (stating that "patients have recalled intubation, abdominal incision, conversation both relevant and irrelevant to the operation, feeling hands inside them, instruments moving, and of course skin suturing"). *Id.*

tion.[21] The patient may be conscious from a few seconds to an hour or more.[22] Not surprisingly, most patients consider this a horrifying experience.[23]

Patient awareness may take the form of implicit or explicit memory.[24] Implicit memory occurs when the patient retains details from the surgery, but cannot consciously recollect them.[25] At the extreme, these patients may suffer from acute depression,[26] but not realize why until hypnosis or other detailed psychological testing is conducted.[27] Explicit memory, in contrast, is characterized by the presence of information which the patient consciously remembers after the operation.[28] It is this type of memory which is usually referred to as patient "awareness."[29]

Conscious memory of the operation can lead to Post Traumatic Stress Disorder ("PTSD") which is normally evidenced by sleep disturbances, dreams, flashbacks, and anxiety.[30] PTSD arises when persons are exposed to enormous psychological stress and terror which overwhelm their system.[31] According to experts, patients experiencing "awareness" frequently develop a traumatic neurosis.[32]

> They show clinical features of both anxiety and depression; they have recurrent nightmares in which they may re-live their experiences; they are afraid to go to sleep because they fear the nightmares or fear that they may die before they wake up; when they do wake up they may find themselves frantically trying to puzzle out whether they are alive or dead.... Symptoms may last for a year or more and may be accompanied by varying degrees of anxiety and/or depression.[33]

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21. Utting, *supra* note 20, at 172-73.
22. *Id.* at 173.
23. *Id.*
24. McLeskey & Aitkenhead, *supra* note 5, at 16.
25. *Id.*; *see also* Dawn P. Desiderio, *Patient Awareness Under General Anesthesia*, 11 CANCER INVESTIGATION, 185, 185 (1993) (stating that such memory is not directly retrievable but requires triggering, exposure, or priming through past experience).
26. A.D. Macleod & E. Maycock, *Awareness During Anaesthesia and Post Traumatic Stress Disorder*, 20 ANAESTHESIA & INTENSIVE CARE, 378, 379-80 (1992); A.R. Aitkenhead, *Conscious Awareness*, *in* CONSCIOUSNESS, AWARENESS AND PAIN IN GENERAL ANESTHESIA, *supra* note 20, at 386, 390.
27. *Id.*
28. *See* Desiderio, *supra* note 25.
29. McLeskey & Aitkenhead, *supra* note 5, at 16.
30. *Id.* at 17.
31. *See* Heneghan, *supra* note 20, at 2; Macleod & Maycock *supra* note 26, at 379.
32. Utting, *supra* note 20, at 173.
33. *Id.*; *see also* Mary Jo Peebles, *Through a Glass Darkly: The Psychoanalytic Use of Hypnosis with Post-Traumatic Stress Disorder*, 37 INT'L J. CLINICAL & EXPERIMENTAL

III. CAUSES OF PATIENT AWARENESS

"Awareness" in an operation occurs due to the delivery of inadequate concentrations of anesthetic agents for the needs of the individual patient.[34] This may occur because of a faulty anesthetic technique, failure to check the anesthesia equipment, genuine equipment failure, or when the anesthetic is intentionally kept to a low level for a justified medical reason.[35]

A. Faulty Anesthetic Technique

The most common cause of "awareness" with recall is faulty anesthetic procedure.[36] Two frequent conditions associated with "awareness" in this category are: the use of short-acting intravenous agents which may wear off and result in a period of lucidity before the longer lasting volatile agents have an opportunity to take effect;[37] and, insufficient administration of the volatile agents.[38] The latter occurs because either the anesthetic agent is too weak, or the agent is only used intermittently during the operation.[39] "Awareness" may also occur if the signs of light anesthesia are misinterpreted because the EKG monitors[40] or blood pressure devices are not checked regularly, or when an inaccurate oxygen monitor or pulse oximeter causes the anesthesiologist to increase inappropriately the concentration of oxygen, thereby diluting the anesthetic gases.[41]

Faulty anesthetic technique may also cause "awareness" when the anesthesiologist fails to consider the particular needs of a patient who may be more resistant to the effects of anesthetics than others.[42] Studies have

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HYPNOSIS 192, 194 (1989) (describing a PTSD patient who suffered through "awareness" during surgery).

34. Aitkenhead, *supra* note 26, at 390.

35. Aitkenhead, *supra* note 26, at 390-95; R.L. Hargrove, *Awareness: A Medicolegal Problem, in* CONSCIOUSNESS, AWARENESS AND PAIN IN GENERAL ANESTHESIA, *supra* note 20, at 149, 150-52.

36. Aitkenhead, *supra* note 26, at 391. Up to 70% of awareness cases have been estimated to be the result of poor anesthetic technique. Hargrove, *supra* note 35, at 150.

37. Frank Guerra, *Awareness and Recall*, 24 INT'L ANESTHESIOLOGY CLINICS, 75, 88 (1986); Hargrove, *supra* note 35, at 150.

38. Guerra, *supra* note 37, at 88.

39. Hargrove, *supra* note 35, at 150-52.

40. An EKG, also known as an electrocardiogram, is defined as a "graphic tracing of the variations in electrical potential caused by the excitation of the heart muscle and detected at the body surface." DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 534 (28th ed. 1994).

41. Aitkenhead, *supra* note 26, at 394.

42. *See* Ghoneim & Block, *supra* note 3, at 283.

shown that patients who suffer from alcoholism or drug addiction, or have prior exposure to anesthetic agents, require greater anesthetic doses to enable them to lose consciousness.[43]

B. Failure to Check the Anesthesia Equipment

Failure to check the anesthesia apparatus is the second leading cause of patient awareness.[44] If, for instance, the anesthetic gases are diluted with air or oxygen because of a loose connection, the patient may be ventilated with room air, preventing unconsciousness.[45] Additionally, if the vaporizer[46] is not connected or refilled properly, or if an unobserved disconnection or emptying of the intravenous agent occurs, patient "awareness" may again result.[47] Because a disconnection in the anesthesia equipment may occur during the administration of the anesthesia itself, great care must be employed throughout the operation.[48]

C. Genuine Equipment Failure

Patient "awareness" can also result from failure of the anesthetic apparatus itself for a reason unattributable to the anesthesiologist.[49] Apparatus failures include: (1) vaporizers which deliver anesthetic concentrations well below the level indicated by the dial setting;[50] (2) faulty ventilators which supply an inadequate amount of anesthetic;[51] and (3) perforated hoses which inadequately connect the supply of anesthetic gases to the vaporizer.[52] As a result of these occurrences, the anesthetic gas flow to the patient is reduced, thereby making it more likely that the patient will experience "awareness."[53]

While the anesthesiologist cannot readily be faulted for not detecting this type of equipment failure prior to the administration of the anes-

43. *Id.*; Guerra, *supra* note 37, at 89.

44. Hargrove, *supra* note 35, at 150-52. Twenty percent of all patient "awareness" cases can be attributed to the anesthesiologist's failure to check his anesthetic apparatus. *Id.*

45. *Id.*

46. A vaporizer is defined as a device for converting a drug into an aerosol so that the medication can be taken by inhalation. AMA ENCYCLOPEDIA OF MEDICINE 1038 (Charles B. Clayman ed., 1988).

47. Aitkenhead, *supra* note 26, at 394.

48. *See id.*

49. *See id.* at 395.

50. Hargrove, *supra* note 35, at 150-52.

51. *Id.*

52. Aitkenhead, *supra* note 26, at 394.

53. *See id.*

thetic, one can argue that the anesthesiologist should have been able to recognize the symptoms of light anesthesia once the operation was underway.[54]

D. Justified Risks

At times, providing the patient with a low level of anesthesia may be justified fully by medical necessity.[55] When a person is desperately ill or in a life threatening situation, it is not unreasonable to keep the patient lightly anesthetized.[56] The reason for under-anesthetizing is that if the patient's already weak vital signs are suppressed further, it is possible the patient may die or become unable to regain consciousness once the anesthetic agents are removed.[57] Light anesthesia is generally justified when patients undergo cardiopulmonary bypasses,[58] pediatric operations,[59] and Caesarian sections.[60]

In Caesarian sections, if the level of anesthesia the mother receives is too high, the infant could be harmed because the anesthetic may depress the fetus and lead to respiratory problems after birth.[61] Therefore, it is preferable to administer light anesthesia until such time as the baby's umbilical cord is clamped; then complete anesthesia can be safely administered.[62]

E. The Problem of Detection

Currently, there are numerous methods to detect "awareness."[63] Although none are completely reliable, recently some progress has been made.[64] "Awareness" is difficult to detect because there is no direct way

54. Hargrove, *supra* note 35, at 150.
55. *Id.* at 152; Aitkenhead, *supra* note 26, at 394.
56. Aitkenhead, *supra* note 26, at 394.
57. *Id.*
58. Desiderio, *supra* note 25, at 186.
59. *Id.*
60. Brad Lee Hilaman, M.D., *Anesthesia During Pregnancy, Labor and Delivery*, *in* LEGAL ISSUES IN ANESTHESIA PRACTICE, *supra* note 7, at 152, 187.
61. Guerra, *supra* note 37, at 83; Ghoneim & Block, *supra* note 3, at 283; Dierdorf, *supra* note 4, at 372.
62. Hilaman, *supra* note 60, at 187.
63. Desiderio, *supra* note 25, at 186-87.
64. *Id.* at 186. Today, four devices are being tested to detect unconsciousness and pain during surgery. Stevens, *supra* note 4, at E4. The first, called the 40-hertz auditory steady state response, is similar to an EEG machine (electroencephalogram) in that it detects brain waves to determine if the patient is conscious. *Id.* When the brain stops reacting to the signal, the patient is likely to be unconscious. *Id.*

to monitor levels of consciousness.[65] Therefore, anesthesiologists must use other indirect monitoring techniques to help them infer the patient's level of consciousness. The devices currently in use include blood pressure, heart rate, sweating, and lacrimation (tear) monitors.[66] While these monitors should indicate a change if the patient becomes distressed or feels pain,[67] case studies reveal that the patient may be fully aware and in pain with no change in any of these mechanisms.[68] Therefore, until it is possible to test for consciousness, the only true effective method of reducing incidents of "awareness" is through improved standards of care by anesthesiologists, rather than dependence on instruments.[69]

IV. THE ANESTHESIOLOGIST'S DUTY OF CARE

In the United States and Canada, there are currently five organizations founded by anesthesia professionals for the promotion of safe anesthesia practice.[70] Through publication of journals, annual meetings, and the issuance of certifications, these organizations strive to maintain the highest levels of care possible for patients.[71] The American Board of Anesthesi-

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The second device, called "the face machine," tracks the contraction of four face muscles to determine if the patient is feeling any pain. *Id.* With this instrument, any grimace the patient makes, no matter how small, may be detected. This provides a method by which the anesthesiologist can know the patient is close to consciousness. *Id.* As the facial contractions increase, the greater the chance the patient is conscious. *Id.*

The third device being tested is the "bispectral EEG." *Id.* This device uses declassified naval sonar technology to detect any physiological responses a patient may have to the incision during surgery. *Id.*

The last approach being tested, called the mid-latency auditory evoked potential (MLAEP), measures the brain's reaction to sound. *Id.* Any brain reaction would indicate the patient may not be fully unconscious.

See also Ghoneim & Block, *supra* note 3, at 285; Dierdorf, *supra* note 4, at 375-77 (discussing recent progress in this area).

65. Henry L. Bennett, *Treating Psychological Sequelae of Awareness*, AM. SOC'Y ANESTHESIOLOGISTS NEWSL., Oct. 1994, at 12, 12.

66. Aitkenhead, *supra* note 26, at 397.

67. *Id.*

68. Ghoneim & Block, *supra* note 3, at 284. It has been suggested that when patients are treated with muscle relaxants, opioids, and other agents, the patient's sympathetic nervous system may not react thereby preventing the anesthesiologist from being alerted to the patient's consciousness. *Id.*

69. Aitkenhead, *supra* note 26, at 397.

70. William H.L. Dornette, *The Standard of Care*, *in* LEGAL ISSUES IN ANESTHESIA PRACTICE, *supra* note 7, at 24, 25. These organizations include the American Association of Nurse Anesthetists ("AANA"), the American Board of Anesthesiology ("ABA"), the American Society of Anesthesiologists ("ASA"), the Canadian Anesthetists Society, and the International Anesthesia Research Society. *Id.*

71. *Id.*

ologists has established the following guidelines for developing patient care.

A. Preoperative Duties

Before surgery is attempted, the anesthesiologist has a duty to fully evaluate each patient to anticipate complications.[72] The anesthesiologist must be familiar with the factors that can lead to "awareness" (such as alcoholism and narcotics use), and with the type of operations that are commonly associated with "awareness" (such as cardiopulmonary bypass procedures or Caesarean sections).[73] The anesthesiologist should also review the patient's past medical history and order any tests[74] necessary to determine what anesthetic to employ, and what dosage to administer.[75] In addition, the anesthesiologist should seek the advice of other medical specialists when there is any doubt as to the preferred treatment.[76] Failure to abide by these requirements may expose the anesthesiologist to litigation.[77]

B. Intraoperative Duties

Before the patient is anesthetized, the anesthesiologist must carefully and thoroughly prepare and check the equipment, drugs, fluids, and gas supplies to ensure that all parts of the anesthesia equipment are connected and operating properly.[78] In addition, the anesthesiologist must

72. Todaro, *supra* note 6, at 32. The anesthesiologist's initial meeting with the patient should accomplish several goals. These goals include: (1) securing pertinent information about the patient's medical and social history; (2) giving the patient a physical examination; (3) allowing the patient an opportunity to ask any questions about the anesthetic procedure (to reduce the patient's anxiety); and, (4) providing the anesthesiologist an opportunity to obtain the patient's informed consent. Clement J. Markarian, *Preanesthesia Evaluation*, *in* LEGAL ISSUES IN ANESTHESIA PRACTICE, *supra* note 7, at 70, 71.

73. Guerra, *supra* note 37, at 94-95.

74. The most common tests which the anesthesiologist should review to determine the best anesthetic include: hemoglobin level, hematocrit, blood chemistries, liver function tests, coagulation studies, and urinalysis. An electrocardiogram and chest film are included for those patients over 40. Elderly patients may have pulmonary tests to determine if they suffer from respiratory problems. Markarian, *supra* note 72, at 72-73.

75. Todaro, *supra* note 6, at 32, 34.

76. *Id.* Most anesthesiologists would agree that appropriate consultations are necessary if, in the anesthesiologist's opinion, there is any possibility the patient will benefit from such expertise. *See* Markarian, *supra* note 72, at 73-74.

77. William H.L. Dornette, *The Health Care Provider-Patient Relationship*, *in* LEGAL ISSUES IN ANESTHESIA PRACTICE, *supra* note 7, at 9, 14.

78. Todaro, *supra* note 6, at 32, 34.

have the ability and knowledge to use the anesthesia equipment.[79] During the surgery, the anesthesiologist must continually chart the patient's status by identifying the various drugs and anesthetic agents that are being utilized along with the time, amount, and frequency of dosage.[80]

Recently, the increased automation and recording capacity of anesthetic devices have allowed anesthesiologists to serve several patients simultaneously, while monitoring each patient more carefully.[81] The drawback of increased reliance on these machines is that if such a machine becomes unavailable because of a malfunction or routine servicing, a serious decrease in the standard of care may result.[82] Patients might be endangered if hospital personnel become so accustomed to using these devices that their absence would interfere with the anesthesiologist's ability to deliver a safe anesthetic.[83]

Without doubt, the anesthesiologist's most important duty is to continuously monitor each patient's vital signs, circulation, and ventilation.[84] Careful monitoring is essential to enable the anesthesiologist to ceaselessly assess the patient's status and detect early signs of complications, such as light anesthesia. Only through careful observation can the anesthesiologist be in a position to take immediate action to rectify any problems and reduce the possibility of patient awareness.[85] When recognition of the complication is delayed because the anesthesiologist fails to monitor the patient properly, grounds for legal action exist.[86]

C. *Postoperative Duties*

Upon completion of the operation, the anesthesiologist has the duty to bring the patient back to consciousness.[87] This entails remaining with the

79. *Id.* The guidelines require that the anesthesiologist possess a working knowledge and capacity to properly apply equipment such as: the laryngoscope, the endotracheal catheters, the selection of airways and masks, the different means of administering artificial ventilation, the defibrillator, and suctioning equipment. *Id.*

80. Bartimus & Dymer, *supra* note 6, at 42.

81. William H. L. Dornette, *Monitoring the Anesthetized Patient*, *in* LEGAL ISSUES IN ANESTHESIA PRACTICE, *supra* note 7, at 125, 127. Automated anesthesia machines have allowed anesthesiologists to record their patient's vital signs more regularly and frequently than has been possible before. *Id.*

82. *Id.*

83. *Id.*

84. Todaro, *supra* note 6, at 34.

85. *Id.*

86. *Id.* at 32-36 (describing when claims against the anesthesiologist will become actionable).

87. The ABA guidelines require the availability of adequate nursing personnel and

patient as long as necessary to evaluate whether the patient has successfully emerged from the anesthetized state.[88] Continued monitoring is essential until the patient's condition stabilizes.[89] Only then is the patient fit to be released to the recovery room.[90]

V. The Patient's Possible Theories of Recovery

In 1994, roughly seven percent of all suits against anesthesiologists related to patient awareness.[91] This statistic reveals that "awareness" during surgery is not an unusual and remote occurrence. Because anesthesiologists have a duty to remain informed about the risks related to their practice,[92] failure to take the proper precautions to prevent "awareness" may render them legally liable.[93]

Depending on the circumstances of the case, a patient suing the anesthesiologist because of consciousness during an operation is likely to rely on one of the following theories of liability: medical malpractice, breach of contract, or failure to obtain informed consent.[94] The patient is most likely to pursue a claim of medical malpractice because the anesthesiologist's insurance will provide coverage if he is found negligent.[95] The plaintiff may also bring a products liability suit against the manufacturer

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equipment to safely care for the recovering patient. They also call for the individual responsible for administering the anesthesia to remain with the patient so long as his presence is necessary. *Id.* at 34-35 (citing ABA Guidelines for Developing Patient Care on Anesthesiology).

88. *Id.* at 35.

89. William H. L. Dornette, *Postanesthesia Care*, *in* Legal Issues in Anesthesia Practice, *supra* note 7, at 145, 146. The anesthesiologist must afford the patient recovering from the effects of the anesthetic adequate monitoring and respiratory and vascular support until the patient has stabilized and his recovery is fairly complete. *Id.* The patient's recovery level is determined by comparing the patient's pre-anesthetic statistics with the patient's current status. This process involves comparing the patient's respiration, circulation, consciousness, and color before and after the surgery, as well as the ability to cough freely. Todaro, *supra* note 6, at 35.

90. Todaro, *supra* note 6, at 35; *see also* Bartimus & Dymer, *supra* note 6, at 43-44 (describing the ASA guidelines for post anesthesia care); Dornette, *supra* note 89, at 145-51 (describing post anesthesia care requirements).

91. Peter S. Sebel, *Are Our Patients Listening?*, 58 Am. Soc'y Anesthesiologists Newsl., Oct. 1994, at 7.

92. Dornette, *supra* note 70, at 26.

93. *Id.* at 14, 25-27 (stating that practitioners must continuously remain informed of the availability of new drugs, enhanced safety, and fewer side effects); Todaro, *supra* note 6, at 32.

94. B.H. Thompson, *An American Legal View*, *in* Consciousness, Awareness and Pain in General Anesthesia, *supra* note 20, at 165, 166-69.

95. Dornette, *supra* note 77, at 15. The author also explains that most medical suits fall under malpractice rather than breach of contract because of the nature of the services

of the anesthesia equipment if an equipment failure is found to be the cause of the awareness.[96]

A. Medical Malpractice

In order to succeed in a medical malpractice suit based on "awareness," the plaintiff must establish two crucial facts. First, the plaintiff must prove that he was actually conscious during the operation.[97] Second, he must prove that he was rendered conscious as a result of the anesthesiologist's negligence.[98] Proving that the patient was conscious is relatively easy if the patient recollects specific conversations from the operation, the manner in which the operation was performed, or specific problems during the surgery which the patient could not have known about other than by being "aware" during the surgery.[99] When this type of corroboration is not available, however, the fact finder may find the patient's claim too speculative to warrant relief.[100] For example, in *Aubert v. Charity Hospital of Louisiana*,[101] the court rejected the plaintiff's suit based on his wife's pain and suffering during general anesthesia because there was no direct evidence that she was conscious or in pain during the operation.[102]

In addition, for the plaintiff to succeed in his suit, he cannot merely be unhappy with the result of the surgery.[103] Rather, the patient must prove

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provided, the absence of any intent to do wrong, and the absence of assertions that a given result will be forthcoming. *Id.*

96. Todaro, *supra* note 6, at 37-38.

97. Thompson, *supra* note 94, at 166.

98. *Id.*

99. *Id.*

100. *Id.*

101. 363 So. 2d 1223 (La. Ct. App. 1978).

102. *Id.* at 1231. In *Aubert*, the widower of a woman who died following childbirth by caesarean section brought a medical malpractice suit against the anesthesiologist and hospital. *Id.* at 1227. The defendants were found liable for negligence based on the finding that the anesthesiologists inserted the endotracheal tube (to supply oxygen to the patient's lungs) into the woman's esophagus, rather than her trachea, and then failing to discover the mistake in a timely manner. *Id.* at 1227. This led to hypoxia (deprivation of oxygen to the brain) causing irreversible brain damages and death. *Id.* The plaintiff also contended that the defendants were liable for his wife's pain and suffering based on the inference that after the initial anesthesia wore off, the continuing anesthesia did not take effect because the tube was improperly placed. *Id.* Of course, the patient could not communicate that she was in pain because of the muscle relaxants she was given. *Id.* The court rejected the plaintiff's claim, stating that the trial court judge was not clearly erroneous in his conclusion that the evidence that Mrs. Aubert might have been conscious during the operation was too speculative. *Id.*

103. Todaro & Todaro, *supra* note 6, at 26.

by a preponderance of the evidence that the anesthesiologist was actually negligent in performing his duty, and that this negligence caused the "awareness" which in turn led to the injury.[104] Therefore, the anesthesiologist will only be held responsible for not anticipating known complications or for failing to take reasonable precautions which are necessary to avoid injuring the patient.[105]

To establish negligence, the plaintiff must prove that: (1) the anesthesiologist owed the plaintiff a duty of care; (2) the anesthesiologist deviated from the standard of care; (3) the plaintiff's injury was proximately caused by the deviation; and, (4) damages resulted from the breach.[106]

1. Duty

Generally, all jurisdictions consider the practice of anesthesiology a specialty and hold the anesthesiologist to the standard of care expected of that specialty.[107] The actual level of care which the anesthesiologist is expected to provide, however, may not be consistent among all jurisdictions.[108] The attorney therefore, must determine which standard the trial court will use.[109] The trial court may apply the "*strict locality rule*" requiring that the physician be held to the degree of diligence, learning, and skill possessed by other physicians in his or her particular community.[110] This standard provides patients with the least protection because even though the procedures used may adhere to local standards, they may prove to be outdated.[111] Alternatively, the trial court may apply the "*modified locality rule*" which requires that the physician be held to the degree of diligence, learning, and skill possessed by physicians in the same or similar community.[112] A third standard the trial court may apply

104. *Id.* at 34.

105. *Id.*

106. *See* 61 AM. JUR. 2D *Physicians, Surgeons, and Other Healers* §§ 99, 326 (1981); 61A AM. JUR. 2D § 99 (1981); Thompson v. Presbyterian Hosp., 652 P.2d 260, 263 (Okla. 1982).

107. Todaro & Todaro, *supra* note 6, at 30. A similar duty of care is also expected of Certified Nurse Anesthetists. *Id.* at 31. For further discussion of duty, *see* Bartimus & Dymer, *supra* note 6, at 40; Dornette, *supra* note 70, at 25-27.

108. Dornette, *supra* note 70, at 25-26.

109. Todaro & Todaro, *supra* note 6, at 30.

110. *See, e.g.*, 61 AM. JUR. 2D, *Physicians, Surgeons, and Other Healers* § 218 (1981).

111. *See id.*

112. *See, e.g., id.*; Todaro & Todaro, *supra* note 6, at 30.

> The general standard of care required of a doctor is that he possess the reasonable degree of learning and skill ordinarily possessed by members of the profession and of his particular school of medicine in the community where he practices, or in similar communities, and that he will use such learning and skill in treating his patient with ordinary skill and diligence.

is the "*national standard rule*" which requires that the physician be held to that degree of diligence, learning, and skill possessed by physicians nationally.[113] This option is by far the most common[114] and provides patients with the best protection by requiring that practitioners stay informed of improvements and developments in their particular practice area which occur nationally.[115]

In most jurisdictions, proving the standard of care is particularly difficult because it is not sufficient to establish that some or even a majority of anesthesiologists would have provided different treatment.[116] As long as the defendant chose and administered the anesthetics in a manner acceptable to a respected segment of anesthesiologists, the defendant will prevail.[117]

As a general rule, the best means for the plaintiff to establish the anesthesiologist's breach of the standard of care is through expert testimony.[118] A witness will qualify as an expert if his education, training, and experience demonstrate that he is qualified to render an opinion on the subject of the testimony.[119] Once the expert is deemed qualified, he will be able to testify on the applicable standard of care, and whether any deviation from this standard occurred during the surgery.[120] Therefore, the expert can inform the trier of fact whether the anesthesiologist fol-

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Leiker v. Gafford, 778 P.2d 823, 826 (Kan. 1989).

113. *See, e.g.*, 61 AM. JUR. 2D *Physicians, Surgeons, and Other Healers* § 219 (1981).

114. Todaro & Todaro, *supra* note 6, at 30.

115. Dornette, *supra* note 70, at 25. Considering the ease with which one can acquire information through communication and publications, the furnishing of national board examinations, and publication of national standards, the standard of care has slowly expanded to encompass all practitioners of that particular specialty nationwide. *Id.*

116. *See, e.g.*, Jones v. Chidester, 610 A.2d 964, 965 (Pa. 1992).

> A medical practitioner has an absolute defense to a claim of negligence when it is determined that the prescribed treatment or procedure has been approved by one group of medical experts even though an alternate school of thought recommends another approach, or it is agreed among experts that alternative treatments and practices are acceptable.

Id. "Where competent medical authority is divided, a physician will not be held responsible if, in the exercise of his judgment, he followed a course of treatment advocated by a considerable number of recognized and respected professionals in his given area of expertise." *Id.* at 969.

117. *See id.*

118. Todaro & Todaro, *supra* note 6, at 32. "[T]he expert witness is the sole means of proving whether a defendant complied with the applicable standard of care in the treatment of a patient or execution of a procedure." *Id.*

119. *See id.*

120. *Id.* (citing 61 AM. JUR. 2D *Physicians, Surgeons, and Other Healers*, § 352 (1981)).

lowed proper procedures, or whether he deviated from them[121] by failing to check the anesthetic monitors or the proper operation and connection of the anesthetic machines.

Another useful tool a lawyer can use to determine the standard of care is through researching published standards. These can be found in hospital guidelines, regulatory agency mandates, and professional organization guidelines sponsored by the American Society of Anesthesiologists, or the American Board of Anesthesiology.[122]

2. Breach

The anesthesiologist's deviation from the established standard of care is a critical element of the claim which is generally proven by expert testimony.[123] The attorney must establish "what actions constitute the standard of medical care in a given situation, then introduce sufficient factual evidence to show that the physician's actions did not measure up to that standard."[124] The plaintiff's strongest proof is an unequivocal statement by a qualified and respected expert that the anesthesiologist's conduct did not meet the required standard of care.[125] The expert must support his contentions by using medical and hospital records which demonstrate how the defendant's improper administration of the anesthesia, failure to react to a warning sign, or failure to check the proper functioning of the machines, led to the patient's "awareness."[126]

3. Causation

a. Direct evidence

The next factor in establishing a *prima facie* case of medical malpractice is causation.[127] To prove causation two factors must be established. First, the plaintiff must show that the defendant's conduct gave rise to the injury (causation in fact).[128] Second, the plaintiff must prove by a preponderance of the evidence that the defendant's conduct was a substantial factor in bringing about the injury (proximate cause).[129] Only in

121. *See* discussion *infra* Part V(A)(2).
122. Todaro & Todaro, *supra* note 6, at 18-19.
123. *Id.* at 33.
124. *Id.* (citing Orozco v. Henry Ford Hosp., 290 N.W.2d 363 (Mich. 1980)).
125. *Id.*
126. *Id.* at 33-34.
127. *Id.* at 34.
128. *Id.*
129. *Id.*; *see, e.g.*, Aubert v. Charity Hosp., 363 So.2d 1223 (La.Ct.App. 1978). "A plaintiff has successfully borne the burden of proof when the evidence taken as a whole indi-

those cases in which the anesthesiologist's deviation from the standard of care is a substantial factor in making the plaintiff aware during the operation would the claim be actionable. Where there are a number of possible causes for the plaintiff's injury, the anesthesiologist's negligence will be regarded as the proximate cause only if the "evidence shows that the defendant's negligence was more likely the causative factor [of plaintiff's 'awareness'] than other possible causes."[130]

Causation, like duty and breach, is best established by an expert witness who testifies that had the defendant followed proper procedures, the plaintiff's damages would have been avoided.[131] It should be noted, however, that for plaintiff's claim to be actionable, he must also prove that there was no intervening cause which would insulate the anesthesiologist from liability.[132] Thus, the anesthesiologist would not be liable if a malfunction of an anesthetic instrument occurred without the anesthesiologist's knowledge or fault, or if some other problem occurred which could not be reasonably predicted.[133]

b. Res Ipsa Loquitur

Ordinarily, the anesthesiologist's negligence is proven directly through the use of expert testimony. Occasionally, however, the plaintiff may be able to use the doctrine of *res ipsa loquitur* to create a presumption of the defendant's negligence without having to directly prove that the defendant breached his duty of care.[134] If the doctrine is satisfied, the burden will then shift to the defendant to produce evidence that he was not negligent, or that his conduct was not the cause of the plaintiff's injuries.[135]

To use the doctrine of *res ipsa loquitur*, the plaintiff must prove the following three conditions:[136] the type of injury the plaintiff suffered does

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cates the defendant's negligence was the most plausible or likely cause of the occurrence and no other factor can as reasonably be ascribed as the cause." *Id.* at 1230.

130. Todaro & Todaro, *supra* note 6, at 35 (citing Fitzgerald v. Manning, 679 F.2d 341 (4th Cir. 1982)).

131. *See id.* at 32.

132. Thompson v. Presbyterian Hosp. Inc., 652 P.2d at 264. The court stated the anesthesiologist will be insulated from liability if the supervening cause was: "(1) independent from the original act, (2) adequate of itself to bring about the result and (3) one whose occurrence was not reasonably foreseeable." *Id.*

133. *See id.*

134. Jeffrey W. Puryear, *Schmidt v. Gibbs: The Application of Res Ipsa Loquitur to Arkansas Medical Malpractice Litigation*, 46 ARK. L. REV. 397, 403 (1993).

135. Todaro & Todaro, *supra* note 6, at 40.

136. *See* Morgan v. Children's Hosp., 480 N.E.2d 464, 466 (Ohio 1985); Randy R.

not ordinarily occur in the absence of negligence;[137] the injury was caused by an agency or instrumentality within the exclusive control of the defendant;[138] and, the plaintiff's injury was not due to any voluntary action or contribution on the part of the plaintiff.[139] Thus, the plaintiff must show: (1) that a patient will not ordinarily be conscious during general anesthesia unless the anesthesiologist is negligent; (2) no one else was in charge of administering the anesthesia; and, (3) that because the muscle relaxants rendered the patient paralyzed, the injury could not have been due to the patient's fault. After the patient establishes these three facts, the burden will shift to the anesthesiologist to prove that he was not in fact negligent.[140]

Although most jurisdictions permit the use of *res ipsa loquitur* in medical malpractice cases,[141] some jurisdictions require the first element to be established through expert testimony.[142] This requirement is based on the premise that the patient's injury may not necessarily speak for itself because of the complex nature of the operation.[143] Therefore, an expert may be needed to characterize the patient's awareness as a condition that

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Koenders, *Medical Malpractice: Res Ipsa Loquitur in Negligent Anesthesia Cases*, 49 A.L.R. 4TH 63, 72 (1986).

137. *See id.*

138. *Id.*

139. *Id.*

140. *See* Koenders, *supra* note 136, at 72-74.

141. *Id.* at 93-94.

142. Todaro & Todaro, *supra* note 6, at 40.

In Orkin v. Holy Cross Hosp., 569 A.2d 207 (Md. 1990), the Maryland Court of Appeals held that when a defendant's negligence is not obvious due to the medical complexity of the matter, lay jurors cannot infer the defendant's negligence from the facts alone without expert testimony. *Id.* at 209. The court, therefore, claimed that when a resolution of an issue of negligence requires knowledge of complicated matters (such as human anatomy, and standards of care), *res ipsa loquitur* does not apply unless expert testimony is available to provide the jury with the background to determine whether the defendant was in fact negligent. *Id.*

The same principle was held in McKinney v. Nash, 174 Cal. Rptr. 642, 645 (Cal. Ct. App. 1981). In this case, the court held that:

> "[s]ince the res ipsa loquitur instruction permits the jury to infer negligence from the happening of the [injury] alone, there must be a basis either in common experience or expert testimony that when such an [injury] occurs, it is more probable than not the result of negligence." The record here reveals that the medical procedures employed by [the anesthesiologists for a hernia repair]. . . were of sufficient complexity to *be outside the realm of* [the jury's] *common experience and appreciation.*

Id. (emphasis added). The court concluded that the question of whether the injury the plaintiff sustained during surgery was negligent required expert testimony. *Id.*

143. Todaro & Todaro, *supra* note 6, at 40.

does not normally occur absent negligence to make the claim actionable.[144] *Res ipsa loquitur* will be applied without expert testimony if the judge is persuaded that a lay person could easily understand that "awareness" does not ordinarily occur absent negligence.[145] Once the plaintiff proves the *res ipsa loquitur* elements, the case will generally go to the jury to determine whether the circumstantial evidence is strong enough to prove the anesthesiologist was negligent.[146]

4. Damages

The last requirement necessary for a *prima facie* case of malpractice is damages. It is a well settled principle of law that in order to recover damages from a defendant, the plaintiff must be able to establish a definable loss.[147] In the case of patient "awareness," the injury will most likely be the plaintiff's physical pain during the surgery, and any psychological suffering and trauma that developed subsequent to the operation.[148]

Generally, pain and suffering is not compensable unless consciously experienced.[149] Proving this point should not be difficult, however, because the very nature of the plaintiff's claim is that he was "conscious" during the operation.[150] The plaintiff will most likely argue that he should be compensated for the pain, suffering, fright, and shock felt during the surgery as a result of being conscious.[151] The patient may also seek compensation for the anxiety, depression, mental suffering, and trauma that developed after the surgery, as well as harm from loss of sleep, and past and future impairment of the ability to enjoy life.[152]

Recovery for injuries suffered during anesthesia is generally promising. In a study conducted by the American Society of Anesthesiologists in 1988, an analysis of suits against anesthesiologists revealed that "the current system of payment for anesthesia-related injuries is favorable to the

144. *Id.*

145. *Id.* An example of this is when the patient receives an injury to a part of the body which should not be affected during the operation. *Id.*

146. *Id.*

147. 25 C.J.S. *Damages* § 64 (1966).

148. Aitkenhead, *supra* note 8, at 351; Moerman, *supra* note 16, at 461-62; Aitkenhead, *supra* note 26, at 389-90; Heneghan, *supra* note 20, at 2-3.

149. *See* 22 AM. JUR. 2D *Damages* § 241 (1988).

150. Thompson, *supra* note 94, at 166. "This should be easy when, for example, the plaintiff can give a detailed description of the operation or the doctor's conversation during the operation." *Id.*

151. Todaro & Todaro, *supra* note 6, at 52.

152. *Id.* at 52-53.

patient when a lawsuit is filed."[153] The study further showed that even when the anesthesiologist's standard of care was deemed appropriate by other experts, the anesthesiologist still preferred to settle in forty-two percent of the cases.[154] Therefore, as long as the plaintiff can convince the fact finder that he was injured as a result of the defendant's act, the patient has a good chance of recovery, even though the anesthesiologist might not have been technically negligent.[155]

5. The Anesthesiologist's Possible Defenses

After the plaintiff establishes a *prima facie* case of negligence, the defendant can rebut the plaintiff's case by raising certain defenses. First, the defendant can show, through expert testimony, that the patient's injury (consciousness and pain during the operation) was not an event that was reasonably foreseeable based on the defendant's meticulous conduct during the administration of the anesthesia.[156] If the defendant can show the injury was too remote, then proximate cause would be missing, causing the collapse of the plaintiff's claim.[157] Second, if the defendant can prove that there were no warning signs indicating the patient was aware during the operation, and that he was extremely careful throughout the operation, then the plaintiff's case will also be weakened.[158] Third, if warning signs were present, the defendant can argue that several plausible explanations existed for them, and that the course of action taken was acceptable under current medical practice.[159]

In response to such a defense, the plaintiff must demonstrate that there were sufficient signs indicating the patient was aware.[160] Alternatively, the plaintiff can seek to demonstrate that even if there were no clear warning signs, the anesthesiologist failed to take the actions necessary to reduce the likelihood of "awareness"[161] by meticulously checking the an-

153. Frederick W. Cheney et al., *Standard of Care and Anesthesia Liability*, 261 JAMA 1599, 1602 (1989).

154. *Id.* at 1603.

155. *Id.* In a study conducted by JAMA, even if the anesthesiologist's performance was deemed appropriate by peers, patients were still able to recover in 42% of the cases. *Id.* at 1602-03.

156. Todaro & Todaro, *supra* note 6, at 43. An example would be if the defendant could show that the likelihood of patient awareness was so remote, as to not seem likely. *Id.*

157. *Id.*

158. *Id.*

159. *Id.*

160. *Id.*

161. *Id.*

esthetic instruments or following expected procedures.[162]

B. Contract Theory

Even if the anesthesiologist was not negligent, the patient may still sue the anesthesiologist for breach of contract. This theory is an option for plaintiffs if, prior to the surgery, the anesthesiologist promised the patient that he would not be conscious during the operation.[163] The patient in turn must then prove that he relied on that promise to his detriment.[164] Thus, if the anesthesiologist expressly promised the patient that he would not feel pain, or be conscious, the defendant will be liable so long as the patient can also prove that he relied on that assurance to his detriment.[165]

It is important to note that jurisdictions may vary with regard to the requirements necessary to establish a contract or warranty claim. Most courts will distinguish a promise of a particular result, which is usually actionable, from a mere generalized statement that the treatment will be safe, which is usually not actionable.[166] Some courts will require clear proof[167] that a warranty was actually made;[168] other courts will require clear and convincing evidence[169] that the physician did in fact make the

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162. *Id.*

163. Thompson, *supra* note 94, at 167.

164. Scarzella v. Saxon, 436 A.2d 358, 361 (D.C. 1981).

165. For plaintiff's claim to be actionable, he must produce proof "of an express contract by which the physician clearly promises a particular result and the patient consents to treatment in reliance on that promise." McKinney v. Nash, 174 Cal. Rptr. at 648; *see also* Scarzella v. Saxon, 436 A.2d at 360. In this case, the surgeon told the patient that:

> the operation [for urethral diverticulectomy] was a simple operation without complications . . . [;that] [i]t only requires a short stay in the hospital, perhaps three or four days . . . [;] that the operation would just temporarily interrupt [her] work [and] temporarily interfere with her sex relationship with [her] husband . . . [;and] that the operation is a safe one.

Id. The jury found for the plaintiff even though Ms. Saxon signed a consent form stating that there was no guarantee or assurance by anyone as to the result. *Id.*; *see also*, Mason v. Western Pa. Hosp., 453 A.2d 974, 975 (Pa. 1982) (The physician assured Mrs. Mason that the operation "would prevent her from incurring future pregnancies." Three years later she gave birth by caesarian section; this was actionable under contract and tort law.).

166. *McKinney*, 174 Cal. Rptr. at 649.

167. *See, e.g.*, Sullivan v. O'Connor, 296 N.E.2d 183, 186 (Mass. 1973); Mood v. Kilgore 425 N.E.2d 341, 342 n.4 (Mass. 1981).

168. *Scarzella*, 436 A.2d at 362.

169. "Clear and convincing evidence" is a higher standard than "clear proof" but lower than "beyond a reasonable doubt." *Id.* "[T]o establish a fact or an element by clear and convincing evidence a party must persuade the jury that the proposition is highly probable, or must produce in the mind of the fact finder a firm belief or conviction that the allegations in question are true." 29 AM. JUR. 2D § 157 (1994).

warranty.[170] In addition, some jurisdictions require the patient to pay the doctor consideration separate from the money paid for the operation itself,[171] while others will not if the warranty was made prior to the surgery or treatment.[172] Finally, some jurisdictions permit suits for breach of contract only if the contract was in writing.[173]

Physicians are therefore advised to "be very careful in what they say to patients before an operation."[174] Any assertions made, such as "you'll feel nothing," or "you'll be completely unconscious," may be construed by a court as an enforceable guarantee.[175]

C. Informed Consent Claims

A third avenue a patient may take to bring suit against the anesthesiologist is lack of informed consent. It is widely recognized that absent emergency circumstances, the physician must obtain the patient's informed consent before administering anesthesia.[176] As an integral part of the physician's overall obligation to the patient, the anesthesiologist has a duty to disclose, within reason, the different options a patient may choose regarding the proposed therapy, as well as the potential risks inherent in each choice.[177] Therefore,

> [u]nless a patient is told ahead of time that there is a risk that he or she will be conscious during the operation, the patient who ends up listening to the operation or feeling pain may have cause to sue the anesthesiologist on the ground that he or she did not give an informed consent to such an unusual opportunity.[178]

Thus, it is advisable for the physician to inform the patient of the possibility that "awareness" may occur, if the anesthesiologist believes the pa-

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170. *Scarzella*, 436 A.2d at 362. Some courts have interpreted clear proof to mean clear and convincing evidence. *See, e.g.*, In re Manuel L., 865 P.2d 718, 720-21 (Cal. 1994).

171. *Scarzella*, 436 A.2d at 362.

172. *Id.*

173. *See, e.g.*, ARIZ. REV. STAT. ANN. § 12-562(c) (West 1992).

174. Thompson, *supra* note 94, at 167-68.

175. *Id.* at 168.

176. Todaro & Todaro, *supra* note 6, at 15.

177. Cobbs v. Grant, 104 Cal. Rptr. 505, 514 (Cal. 1972). In order to obtain a true informed consent, the anesthesiologist must disclose the available facts and his opinion as to risks and benefits based on those facts. When there is any doubt whether disclosure should be made, the anesthesiologist should lean toward over-disclosure, rather than withholding information. Markarian, *supra* note 72, at 75.

178. Thompson, *supra* note 94, at 168.

tient may experience periods of consciousness during the operation.[179]

The main issue in a suit for lack of informed consent generally will be whether the anesthesiologist had a duty to notify the patient of the risk of possible consciousness.[180] The analysis of this question will vary from jurisdiction to jurisdiction.

In most states, the anesthesiologist's duty to inform the patient of the risks and dangers of the proposed surgical procedure will depend on whether the anesthesiologist acted as a reasonable medical practitioner under the same or similar circumstances.[181] Therefore, most courts will look at the custom of physicians practicing in the community to see if the physician acted reasonably by not disclosing the fact that the patient may be conscious during portions of the operation.[182] The reasonableness of the disclosure, or nondisclosure, will depend on the facts and circumstances of each case.[183] The burden of proof will generally rest with the plaintiff to establish that the anesthesiologist deviated from his duty by not disclosing sufficient information upon which the patient could make an informed consent.[184] In those jurisdictions which utilize the reasonable physician standard, expert testimony must affirm the assertion that the anesthesiologist deviated from the required duty to disclose.[185]

In other states,[186] the focus of the court is on whether the risk of being conscious is something an average, reasonable patient would have considered material in his or her decision to undergo surgery.[187] Thus, these jurisdictions shift the focus of inquiry from the reasonable physician standard to the reasonable patient standard. The issue to be resolved will entail whether a reasonable patient would have considered such information, or warning, "material" in making his or her decision. "[A] risk is thus material when a reasonable person, in what the physician knows or should know to be the patient's position, would be likely to attach significance to the risk . . . in deciding whether or not to forego the proposed

179. *Id.*
180. *Id.*
181. Leiker v. Gafford, 778 P.2d 823, 830 (Kan. 1989).
182. *Id.*
183. *Id.*
184. *Id.*
185. Todaro & Todaro, *supra* note 6, at 16.
186. Truman v. Thomas, 165 Cal. Rptr. 308, 311 (1980).
187. *See, e.g.*, Canterbury v. Spence, 464 F.2d 772 (D.C. Cir. 1972), *cert. denied*, 409 U.S. 1064 (1972); Cobbs v. Grant, 104 Cal. Rptr. 505 (Cal. 1972); Jones v. Griffith, 688 F. Supp. 446, 447 (N.D. Ind. 1988); Coryell v. Smith, 653 N.E. 2d 1317, 1320 (Ill. App. Ct. 1995); Hondroulis v. Schumacher, 553 So. 2d 398, 403 (La. 1988).

therapy."[188]

In jurisdictions that apply the reasonable patient standard, the plaintiff has the initial burden of going forward with evidence to establish a *prima facie* case.[189] Once the *prima facie* case is established, the burden shifts to the physician to support his decision to not disclose.[190] These jurisdictions do not require expert medical testimony to establish the informed consent claim because the physician's duty is determined from the patient's needs and point of view.[191]

A physician can interpose several defenses for his decision not to inform the patient of the risk of awareness. The strongest defense an anesthesiologist can use is the "therapeutic privilege" defense.[192] This privilege releases the anesthesiologist from liability for failing to tell the patient about the risk of consciousness "if the patient's emotional state was fragile enough that telling the patient ran the risk of making the operation more dangerous or leading the patient irrationally to reject the safest anesthetic technique."[193]

A second defense exists when emergency circumstances dictate that the patient must undergo immediate surgery without time to obtain consent.[194] Thus, if "the patient is unconscious or otherwise incapable of consenting, and harm from a failure to treat is imminent and outweighs any harm threatened by the proposed treatment," then the physician will not necessarily be faulted for failing to disclose to the patient that he may be conscious during the operation.[195]

In determining whether the patient should have been warned of the risk of being conscious, the courts weigh two factors: the statistical

188. *Canterbury*, 464 F.2d at 787.

189. Cobbs v. Grant, 104 Cal. Rptr. at 516; Truman v. Thomas, 165 Cal. Rptr. at 312. To establish a *prima facie* case a plaintiff will have to show: (1) the anesthesiologist had a duty to inform him of the risk of awareness because a reasonable patient would find it material in making a decision; (2) failure to disclose the risk led the patient to undergo the surgery; (3) but for the anesthesiologist's failure to disclose, the patient would not have undergone the surgery; and (4) during the surgery, the patient was fully aware and experienced excruciating pain. Cobbs v. Grant, 104 Cal. Rptr. at 515-16.

190. *Id.*

191. Todaro & Todaro, *supra* note 6, at 16. *Canterbury*, 464 F.2d at 792; *Cobbs*, 104 Cal. Rptr. at 514; Small v. Gifford Memorial Hosp., 349 A.2d 703, 706 (Vt. 1975) (discussing whether a reasonable person would want to know).

192. Canterbury v. Spence, 464 F.2d at 789. In this exception, the physician calculates that the risk of disclosure would pose such a threat of detriment to the patient as to be deemed permissible. *Id.*

193. Thompson, *supra* note 94, at 169.

194. Canterbury v. Spence, 464 F.2d at 788.

195. *Id.*

probability that "awareness" will occur, and the court's perception of how traumatic it is to be rendered conscious during surgery.[196] It is not expected that physicians disclose every minute risk. Therefore, courts will generally not require disclosure if the chance of "awareness" was minuscule.[197] However, "awareness" during surgery is estimated to occur in .2 to 1%[198] of all general anesthesia surgeries. Because this translates into thirty thousand cases annually in the United States alone, this risk is significant and should be disclosed.[199] In addition, even if the court believes the risk is too minimal to require disclosure, the fact that consciousness may lead to severe trauma and dysfunction may still lead the court to agree that disclosure should have been provided.[200]

Once the plaintiff convinces the court that he should have been informed of the risk, his case is still not won. To prevail, the plaintiff must establish, by a preponderance of the evidence, that had the anesthesiologist actually informed him about the risk of awareness and pain, he would have refused the procedure or insisted on a different anesthetic technique.[201] This requirement is seen in *Cobbs v. Grant,*[202] where the court ruled against the plaintiff's lack of informed consent claim because he failed to establish that were he informed of the risk entailed in treating his ulcer, he would not have consented to the operation.[203] The plaintiff may find it especially difficult to prevail if the anesthesiologist can prove the anesthetic technique used was the least risky and most suitable for the patient's needs.[204]

D. Medical Products Liability

Even if the anesthesiologist was not negligent and properly informed the plaintiff of the possibility of "awareness" during the operation, the patient may still be able to recover damages in a products liability suit.[205] A products liability suit is actionable when the anesthetic apparatus itself

196. Thompson, *supra* note 94, at 169.
197. *Canterbury*, 464 F.2d at 786.
198. *See supra* note 5 and accompanying text. *See also* Ghoneim & Block, *supra* note 3, at 282 (discussing additional studies with estimates of awareness occurring in up to four percent of all patients undergoing general anesthesia).
199. *Id.*
200. Thompson, *supra* note 94, at 169.
201. *Id.*
202. 502 P.2d 1 (Cal. 1972).
203. *Id.* at 11 (citing Shetter v. Rochelle, 409 P.2d 74 (1965)); Sharpe v. Pugh, 155 S.E.2d 108 (N.C. 1965).
204. Thompson, *supra* note 94, at 169.
205. *See* Todaro & Todaro, *supra* note 6, at 37-38.

fails to deliver an adequate dosage of anesthetic agents, or an alarm to alert the anesthesiologist of a disconnection fails to work.[206] Additionally, a products liability suit will be possible if the anesthetic agent used during the surgery contained impurities or was mislabeled, thereby leading to the patient's injury.[207]

In contrast to the other suits discussed in this Comment, a products liability suit does not target the anesthesiologist for failing to abide by the applicable standard of care. Rather, the suit targets the manufacturer of the anesthetic device which malfunctioned, or the drug which was mislabeled or adulterated.[208] A plaintiff may find a products liability suit especially attractive if the manufacturer has deep pockets[209] with which to satisfy the potential adverse judgment against it.

The legal theories under which a products liability claim can be brought include strict liability,[210] negligence,[211] breach of warranty,[212] and misbranding.[213] The manufacturer will be held liable if the plaintiff can prove that: (1) the machine was defective, and did not supply sufficient

206. *See* discussion *supra* Part III(C).

207. Todaro & Todaro, *supra* note 6, at 39.

208. *See* Debra T. Landis, *Annotation: Public Liability: Medical Machinery Used in Plaintiff's Treatment* 34 A.L.R. 4TH 533, 533 (1984); Bryan J. Maedgen et al., *A Survey of Law Regarding the Liability of Manufacturers and Sellers of Drug Products and Medical Devices*, 18 ST. MARY'S L.J. 395, 397-457 (1986).

209. The term "deep pockets" is defined as "a person or corporation of substantial wealth and resources from which a claim or judgment may be made." BLACK'S LAW DICTIONARY 414 (6th ed. 1990).

210. In Savina v. Sterling Drug, Inc., 795 P.2d 915 (Kan. 1990), the Supreme Court of Kansas explained that:

> The public policy considerations underlying the doctrine of strict liability are that the manufacturer can anticipate and guard against the recurrence of hazards, that the cost of injury, which may be overwhelming to an injured individual, can be distributed by the manufacturer among the consuming public, and that the marketing of defective products should be discouraged.

Id. at 923 (citing Brown v. Superior Court, 751 P.2d 470 (Cal. 1988)).

211. Landis, *supra* note 208, at 533; Maedgen, *supra* note 208, at 402, 415.

> In a negligence action, the issue is whether a defendant exercised due care in formulating the warning [of the dangers associated with its product]. The manufacturer's duty to test and investigate its product depends on the foreseeability of the hazards to potential users in light of current scientific medical knowledge. Strict liability suits, on the other hand, confront whether the lack of warning made the product unreasonably dangerous.

Id. at 402, 415.

212. In most jurisdictions, the seller is required to warn foreseeable users against the presence of dangers in his or her product if the dangers are not generally known. Maedgen, *supra* note 208, at 455. For a breach of express warranty to exist, the defendant must represent that its product is not harmful and entails no risk. *Id.* at 416.

213. *Id.* at 452.

anesthesia; (2) the defendant was the manufacturer or seller of the product alleged to have caused the injury; (3) the defect was present when the product left the manufacturer's factory; and, (4) the plaintiff's injury was proximately caused by the product.[214] In addition, the manufacturer may be held liable if it failed to furnish appropriate warnings detailing the possibility that the anesthetic machine may malfunction, or that insufficient levels of anesthesia may be released without notice.[215]

An example of such a suit is *Ohio Medical Products v. Suber, Inc.*[216] In *Suber*, the Texas Court of Appeals affirmed a judgment in excess of six million dollars against the manufacturers, sellers, and servicers of an anesthetic gas machine, for causing plaintiff's wife to suffer permanent brain damage from an overdose of anesthesia during a minor surgical procedure.[217] The plaintiffs, using three expert witnesses, presented extensive testimony showing that the machine was negligently and defectively designed, that the defendants negligently failed to warn of the hazards associated with the use of the machine, and that these factors proximately caused the injury in question.[218] Therefore, if the plaintiff can establish that his injury was proximately caused by the manufacturer's negligence, or by its failure to warn of a possible malfunction, an actionable claim will lie.

When it is suspected that plaintiff's "awareness" was caused by equipment failure, the attorney must secure the machine service records as soon as possible to prevent potential tampering.[219] The attorney should also familiarize himself with any voluntary product performance standards that have been developed by the product manufacturers and anesthetic clinicians to determine whether an action will lie.[220]

VI. Anesthesiologists Can Protect Themselves From Lawsuits

Apart from good medical practice, the best way for anesthesiologists to stay out of court is through proper communication with their patients before and after the operation.[221] In an interview of over one hundred patients who were "aware" during surgery, nearly all claimed legal pro-

214. Landis, *supra* note 208.
215. *Id.*
216. 758 S.W.2d 870 (Tex. Ct. App. 1988).
217. *Id.* at 871, 873.
218. *Id.* at 873.
219. Todaro & Todaro, *supra* note 6, at 38.
220. *Id.* at 39.
221. Ghoneim & Block, *supra* note 3, at 287.

ceedings could have been avoided had someone: (1) informed them of the risk before the operation; (2) talked to them after the surgery about their experience; and, (3) provided them with an explanation or an apology.[222]

Prior to the operation, the anesthesiologist may want to inform the patient of the possibility of experiencing "awareness" for two reasons. First, a full and complete disclosure of the risks inherent in anesthesia better protects the anesthesiologist from future lawsuits by insulating himself from a claim that the patient did not consent to the possibility of being "aware" during the operation.[223] Second, most patient anxiety stemming from the surgery arises from the fear that something must be terribly wrong because the awareness is completely unexpected.[224] The patient may be more relaxed and less traumatized if he or she knows that being aware is possible, and not unusual.[225] The anesthesiologist should, therefore, inform his patient of this possibility except when valid reasons for not doing so are present.[226] In that event, the anesthesiologist should clearly document the reasons for non-disclosure in the patient's chart.[227] If a suit should arise, the documentation would help the anesthesiologist prove the reasons for not administering the proper anesthetic dosage.

Informing the patient of the possibility of "awareness" is even more important in those situations when there is a greater likelihood of "awareness" occurring. One such situation is when the patient exhibits specific factors that are associated with greater chances of "awareness," such as high preoperative anxiety, obesity, chronic use of sedatives, or alcoholism.[228] The other situation arises when the operation is one that is more likely to lead to "awareness," such as Caesarian sections, surgery to correct cardiovascular instability requiring light anesthesia, and open heart surgery.[229]

During the surgery, if the anesthesiologist suspects the patient may be

222. Bennett, *supra* note 65, at 13; Aitkenhead, *supra* note 8, at 351; Guerra, *supra* note 37, at 92-94, 96.

223. *See* discussion *supra* Part V(C).

224. *See* Guerra, *supra* note 37, at 95.

225. Ghoneim & Block, *supra* note 3, at 287.

226. *Id.* Valid reasons for not informing the patient of the risk of "awareness" include the "therapeutic privilege" and the "emergency circumstance." *See supra* notes 192-95 and accompanying text.

227. *Id.*

228. BENNO BONKE ET AL., MEMORY AND AWARENESS IN ANESTHESIA 212 (1989); Desiderio, *supra* note 25, at 186.

229. BONKE ET AL., *supra* note 228, at 212.

"aware," talking to the patient, reassuring him, and increasing the anesthetic dosage as needed to rectify the situation may be advisable.[230] As many anesthesiologists now know,

> [o]ne can never be 100 percent sure that a patient is completely anaesthetized and not aware. Therefore, care should at all times be taken of the possibility that the patient is registering stimuli. In case of a suspected awakening during anaesthesia, or unwanted lightening, address the patient directly and try to establish contact. There is nothing worse than lying down, presumably anaesthetized, and unable to utter a word or move an eyelid. An occasional word of encouragement and a pat on the cheek will show that you are calm and relaxed, and aware of what is going on and that therefore the patient is *supposed* to be in this state, even if he is conscious and aware of the ongoing surgery.[231]

After the surgery, if the patient claims he was aware, the anesthesiologist should allow the patient to discuss what he experienced and felt.[232] The anesthesiologist should solicit specific facts from the patient to assure that he was really aware and not dreaming.[233] The anesthesiologist should not be defensive or reluctant to hear what the patient has to say.[234] Denial may lead the patient to be even more anxious, depressed, or enraged.[235] In addition, telling the patient he could not have been "aware" may be emotionally harmful because it may lead the patient to begin doubting his own sanity.[236] This in turn may lead to traumatic neurosis and PTSD.[237]

Once the patient proves he was "aware," by recalling specific conversations or details from the operation that an ordinary anesthetized patient would not know,[238] the anesthesiologist should give the patient a straight-

230. *Id.*

231. *Id.* at 213 (citing R.S. Blacher, *Awareness During Surgery*, 61 ANESTHESIOLOGY 1, 2 (1984)).

232. *Id.* at 212.

233. Ghoneim & Block, *supra* note 3, at 287.

234. Guerra, *supra* note 37, at 91.

235. *Id.*

236. Utting, *supra* note 20, at 173.

237. *Id.*; *see also* J.M. Cundy, *Early Intervention in Treatment of Post-Anesthetic Awareness Stress Disorders*, *in* MEMORY AND AWARENESS IN ANESTHESIA, *supra* note 1, at 343, 343 (stating that studies have shown that a formal debriefing session on the day after the disaster has value in placing people's perceptions into a logical framework which may prevent the development of PTSD). Also, early intervention may prevent the later development of an acute stress disorder. *Id.* at 343-45.

238. Heneghan, *supra* note 20, at 8.

forward explanation and acknowledge the possibility that "awareness" occurred.[239] Most importantly, however, the anesthesiologist should show empathy with the patient's sense of hopelessness during the operation.[240]

By sympathizing with and believing the patient, the anesthesiologist may be able to relieve the patient's fear of becoming insane, and avoid exacerbating the patient's traumatic experience. Only open and sincere conversations with the patient will reduce the risk of a lawsuit by a patient who experienced "awareness."[241] With communication, the patient may appreciate the anesthesiologist's sincerity, humanity, and fallibility, and decide not to sue.

VII. CONCLUSION

"Awareness" during anesthesia may be the worst experience of the patient's life. The experience of being awake yet paralyzed, and of perceiving pain while being helpless to react, is a profound trauma.[242] Such a horrifying experience can be truly characterized as an undeserved cruel and unusual punishment.[243] The punishment, however, does not end with the surgery. After surgery, the patient may re-experience symptoms of the traumatic ordeal through nightmares and intrusive memories, and may also exhibit coping problems evidenced by emotional numbing, forgetfulness, and avoidance of responsibilities.[244]

Because the possibility of patient awareness has become better known in the last decade,[245] it should be easier for an attorney to argue that the anesthesiologist should have been alert to the possibility of patient awareness. This expectation would, therefore, require the anesthesiologist to routinely check for symptoms of light anesthesia and continually abide by the newest guidelines and procedures.

It is essential for anesthesiologists to live up to the high standard of

239. Bonke, *supra* note 228, at 214.

240. *Id.*

241. McLeskey & Aitkenhead, *supra* note 5, at 19.

242. Macleod & Maycock, *supra* note 26, at 379.

243. *See* George P. Smith, *Utility and the Principle of Medical Futility: Safeguarding Autonomy and the Prohibition Against Cruel and Unusual Punishment*, 12 J. CONTEMP. HEALTH L. & POL'Y 1, 38 (1995) (discussing cruel and unusual punishment in the context of administering futile medical treatment).

244. Macleod & Maycock, *supra* note 26, at 379.

245. Growing recognition of patient awareness is evidenced by the increase in articles and commentaries on the subject in medical journals, and as documented by anesthesiology organizations. *See* McLeskey & Aitkenhead, *supra* note 5, at 19.

care expected of them. Only through the threat of litigation will better anesthetic practice arrive. Those anesthesiologists who meet the requisite standard of care, and who meticulously stay informed of new developments in their field, have nothing to lose.

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