

Washington and Lee Law Review

Volume 39 | Issue 4 Article 14

Fall 9-1-1982

The Uniform Determination Of Death Act: An Effective Solution To The Problem Of Defining Death

Follow this and additional works at: https://scholarlycommons.law.wlu.edu/wlulr



Part of the Medical Jurisprudence Commons

Recommended Citation

The Uniform Determination Of Death Act: An Effective Solution To The Problem Of Defining Death, 39 Wash. & Lee L. Rev. 1511 (1982).

Available at: https://scholarlycommons.law.wlu.edu/wlulr/vol39/iss4/14

This Note is brought to you for free and open access by the Washington and Lee Law Review at Washington and Lee University School of Law Scholarly Commons. It has been accepted for inclusion in Washington and Lee Law Review by an authorized editor of Washington and Lee University School of Law Scholarly Commons. For more information, please contact christensena@wlu.edu.

THE UNIFORM DETERMINATION OF DEATH ACT: AN EFFECTIVE SOLUTION TO THE PROBLEM OF DEFINING DEATH

The occurrence of death traditionally has carried important legal, medical, philosophical, and social implications. Until recently, most legal and medical persons perceived no problem with defining the phenomenon of death. Both the legal and the medical professions traditionally regarded death as an event that occurred upon the cessation of all vital functions, including circulation, heartbeat, and respiration. The common law emphasis on cardiorespiratory function was adequate when the observer required visible and detectable evidence to determine the occurrence of death and continues to be a reliable basis for pronouncing death in most situations. Recent advances in medical technology have

¹ See generally Veith, Fein, Tendler, Veatch, Kleiman & Kalkines, Brain Death: I. A Status Report of Medical and Ethical Considerations, 238 J.A.M.A. 1651 (1977) [hereinafter cited as Brain Death I]; Veith, Fein, Tendler, Veatch, Kleiman & Kalkines, Brain Death: II. A Status Report of Legal Considerations, 238 J.A.M.A. 1744 (1977) [hereinafter cited as Brain Death II].

² See Guthrie, Brain Death and Criminal Liability, 15 CRIM. L. BULL. 40, 42 (1979) [hereinafter cited as Guthrie] (no precise legal definition needed in past because death regarded as absence of signs of life).

³ See Selby & Selby, Status of the Legal Definition of Death, 5 Neurosurgery 535, 535 (1979) [hereinafter cited as Selby & Selby]. Prior to 1979, Black's Law Dictionary defined death as "[t]he cessation of life; the ceasing to exist; defined by physicians as a total stoppage of the circulation of the blood and a cessation of the animal and vital functions consequent thereupon, such as respiration, circulation, etc." Black's Law Dictionary 488 (4th ed. 1968). But see Black's Law Dictionary 360 (5th ed. 1979) (recognizing that some states have enacted brain death statutes); note 46 infra (state statutes containing brain death standard). Cases applying the common law standard of death generally apply the definition provided in Black's. See, e.g., Smith v. Smith, 229 Ark. 579, ______, 317 S.W.2d 275, 279 (1958) (simultaneous death case); In re Estate of Schmidt, 67 Cal. Rptr. 847, 854 (1968) (action to determine survivorship); Thomas v. Anderson, 96 Cal. App. 2d 371, ______, 215 P.2d 478, 482 (1950) (simultaneous death issue); Gray v. Sawyer, 247 S.W.2d 496, 497 (Ky. 1952) (issue of survivorship); Douglas v. Southwestern Life Ins. Co., 374 S.W.2d 788, 791 (Tex. Civ. App. 1964) (issue involving distribution of insurance proceeds). See generally Brain Death II, supra note 1, at 1745.

^{*} See Task Force on Death & Dying of the Institute of Society, Ethics & Life Sciences, Refinements in Criteria for the Determination of Death: An Appraisal, 221 J.A.M.A. 48, 48 (1972) [hereinafter cited as Refinements] (necessity of visible manifestations of death before development of instruments that assisted in detecting vital signs). Before the development of cardiac and respiratory support devices absence of heartbeat and respiration accurately established death in most cases. See Guthrie, supra note 2, at 46. Because of the interdependence of the brain, heart, and lungs, cessation of circulation or respiration meant that the brain necessarily would die within 30 minutes. Id.

⁵ See Gregory, A New "Definition" of Death?, 9 LEGAL ASPECTS MED. PRAC. No. 8 at 2 (Aug. 1981) [hereinafter cited as Gregory] (continued applicability of traditional criteria); Refinements, supra note 4, at 48 (cessation of respiration and heartbeat indicate death in most cases).

complicated the determination of death in some cases, however.⁶ The development of artificial support devices, such as the respirator, has enabled physicians to maintain cardiorespiratory functions in persons whom physicians otherwise would pronounce dead under the common law standard.⁷ Since artificial support systems can prolong cardiorespiratory functions in many patients who have no possibility of ever recovering brain function or spontaneous cardiorespiratory activity, the medical profession has reevaluated the criteria and definition of death.⁸

In reconsidering the definition of death, the medical profession has determined that death is a process rather than an event. Recent medical achievements in artificially prolonging life have led physicians to conclude that patients reach a stage in the process of dying beyond which no chance for recovery exists. The medical profession widely accepts that cessation of total brain function, known as brain death, constitutes an irreversible stage in the process of dying beyond which all other organs imminently will cease to function. In addition, the medical profession

⁶ See Gregory, supra note 5, at 2 (use of artificial support devices may preclude use of traditional death standards); Refinements, supra note 4, at 48 (technological intervention renders insufficient application of traditional standards for determining death); text accompanying notes 7 & 8 infra (development of artificial devices that may maintain cardiorespiratory functions).

⁷ See Capron and Kass, A Statutory Definition of the Standards for Determining Human Death: An Appraisal and a Proposal, 121 U. PA. L. REV. 87, 89 (1972) [hereinafter cited as Capron & Kass] (insufficiency of traditional death standard where pacemakers and respirators can maintain cardiorespiratory functions that no longer operate spontaneously).

^{*} See id. Criteria for determining death proposed by Harvard Medical School's Ad Hoc Committee to Examine the Definition of Brain Death have received the widest acceptance by the medical profession regarding the determination of death. See id.; Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death, A Definition of Irreversible Coma, 205 J.A.M.A. 337, 337-38 (1968) [hereinafter cited as Harvard Committee]. The Harvard report adopted "irreversible coma" as the standard for death and established specific criteria for diagnosing irreversible coma. Harvard Committee, supra, at 337-38; see text accompanying notes 9-12 infra (medical view of determination of death).

⁹ See Hirsh, Brain Death, 1975 Med. Trial Tech. Q. 377, 378-79 [hereinafter cited as Hirsh]. The medical profession has concluded that humans die in stages, progressing from clinical death to brain death, to biological death, to cellular death. Id. at 378. Cessation of respiration and circulation results in clinical death. Id. Absent prompt resuscitative measures, brain death quickly follows clinical death since lack of oxygen to the brain causes brain death in a matter of minutes. Id. In addition, brain death may eventually occur despite resuscitation efforts. Id. at 379. Since the brain also dies in progressive stages, biological death occurs only when all portions of the brain are dead. Id. The process of cellular death follows biological death. Id. See generally Victor, Brain Death: An Overview, 1981 Med. Trial Tech. Q. 37 [hereinafter cited as Victor].

¹⁰ See Hirsh, supra note 9, at 379 (point of irreversibility in sequence of dying that physicians can diagnose as death).

[&]quot; See id.; Victor, supra note 9, at 41. The condition of brain death occurs when brain tissue is destroyed completely. See id. The brain dies in progressive stages, beginning with the higher centers of the brain, which control consciousness and related functions. See Hirsch, supra note 9, at 379. Since the brain stem, which contains the vital centers control-

has established various criteria for determining when the entire brain has ceased to function.¹²

Although the medical profession has recognized the validity of the brain death concept and the existence of reliable criteria to determine when brain death has occurred, the legal profession has responded more slowly to changes in medical technology. Neither the courts nor the state legislatures presently agree on application of the brain death standard as a legal basis for determining when death occurs. Examination of the various legal issues that turn on the occurrence of death indicates the need for a determination of death standard that is medically and legally uniform. Examination of death standard that is medically and

The expanding practice of organ transplantation, for example, has emphasized the need for a uniform standard of death that embraces the brain death concept.¹⁶ In 1968, the National Conference of Commis-

ling cardiovascular functions, dies last, spontaneous cardiorespiratory functions can continue despite irreversible destruction of higher centers of the brain. See id.; text accompanying note 101 infra (brain damaged person who retains brain stem function may continue spontaneous cardiorespiratory activity). Therefore, the medical profession accepts that only total destruction of the brain, including the brain stem, signals the point of irreversibility in the dying process. See Hirsh, supra note 9, at 379.

three diagnostic criteria for determining irreversible cessation of brain function, which the Committee labelled "irreversible coma." Id. The diagnostic criteria include complete unresponsiveness and unreceptivity to externally applied stimuli, total absence of spontaneous breathing and spontaneous movements for a specified period of time, and the absence of elicitable reflexes. Id. In addition, the Harvard Committee considered a flat electroencephalogram to be valuable confirmation of the other tests. Id. at 338. The Harvard Committee recommended that physicians repeat the tests 24 hours after the initial testing and that doctors rule out the possibility that hypothermia or drugs induced the patient's coma. Id.

Although the majority of physicians apply the Harvard criteria, other medical organizations have established similar criteria for determination of irreversible cessation of brain function. See generally Black, Brain Death (pts. 1 & 2), 299 New Eng. J. Med. 338, 393 (1978) [hereinafter cited as Black] (discussion of various medical criteria for determining death).

- ¹³ See Note, The Time of Death—A Legal, Ethical and Medical Dilemma, 18 CATH. LAW. 243, 244 (1972) [hereinafter cited as Time of Death] (difference of opinion between legal and medical professions regarding definition of death).
- ¹⁴ See text accompanying notes 46-49, 57-82 infra (various state approaches to determination of death).
- 15 See Note, Legislation and Death: Do They Mix?, 46 Alb. L. Rev. 174, 177-80 (1981) [hereinafter cited as Legislation and Death] (issues that require legal determination of death standard); text accompanying notes 16-44 infra (discussing issues that require uniform standard for determining death). Some commentators have suggested a contextual approach to the determination of death that allows physicians to apply a different standard of death in different situations. See generally Brennan & Delgado, Death: Multiple Definitions or a Single Standard?, 54 S. Cal. L. Rev. 1323 (1981); Dworkin, Death in Context, 48 Ind. L.J. 623 (1973). The application of different standards for different purposes, however, poses the risk of confusion and abuse. See Capron & Kass, supra note 7, at 106-7 (criticizing possibility of adopting multiple definitions of death for separate purposes).

¹⁶ See, e.g., Dornette, How Does Your State Define Death?, 8 LEGAL ASPECTS MED. PRAC. No. 5 at 19, 20-21 (1980) [hereinafter cited as Dornette] (enactment of Uniform sioners on Uniform State Laws (NCCUSL) approved the Uniform Anatomical Gift Act¹⁷ (UAGA) in an effort to encourage donation of anatomical gifts for transplantation and research.¹⁸ The UAGA, adopted in all states,¹⁹ fails to specify the appropriate standards for determining the death of prospective organ donors.²⁰ Consequently, the effectiveness of the UAGA has varied from state to state.²¹ The most successful organ transplants generally involve donors who suffered brain death after a sudden head injury, brain tumor, or stroke, since the organs of brain dead donors generally neither have been destroyed nor have begun to deteriorate and thus are more viable for transplantation.²² In a state that permits application of a brain death standard, physicians can prevent deterioration of vital organs by artificially maintaining the circulation and respiration of a patient who satisfies the ordinary medical criteria for brain death.²³ Thus, physicians may maintain the organs of a donor

Anatomical Gift Act necessitated definition of death that includes brain death standard); Brain Death II, supra note 1, at 1744 (organ transplants require recognition of brain-related criteria of death); F. Stuart, F. Veith, R. Cranford, Brain Death Laws and Patterns of Consent to Remove Organs from Cadavers in the United States and Twenty-eight Other Countries, at 14-18 (May 30, 1980) (report presented at Sixth Annual Meeting of American Society of Transplant Surgeons) [hereinafter cited as Stuart, Veith & Cranford] (brain death standard required to ensure viable organs for transplantation).

- 17 UNIFORM ANATOMICAL GIFT ACT (UAGA).
- ¹⁸ See Commissioners' Prefatory Note, UNIFORM ANATOMICAL GIFT ACT (UAGA will encourage anatomical gifts by establishing uniform and comprehensive procedures).
- ¹⁹ See, e.g., CAL. HEALTH & SAFETY CODE §§ 7150-7158 (West 1970); MISS. CODE ANN. §§ 41-39-31 to -51 (1972); N.Y. Pub. HEALTH LAW §§ 4300-4307 (McKinney 1977); VA. CODE §§ 32-364.3 to .11 (1950); Stuart, Veith & Cranford, supra note 16, at 4 (UAGA adopted in all 50 states by 1970).
- ²⁰ See Uniform Anatomical Gift Act § 7(b). The UAGA specifies the physician who tends the prospective donor at his death determines the time of the donor's death, but the Act fails to indicate what standards a physician must apply in declaring a person dead. Id. The comments to § 7 of the UAGA note, however, that the determination of time of death is left to the judgment of the attending physician. Commissioners' Notes, Uniform Anatomical Gift Act § 7(b). The drafters of the UAGA apparently intended that time of death would be a factual question that physicians would determine according to accepted medical criteria. See id.; Note, Uniform Anatomical Gift Act—Death construed by Court Consonant with Medical Standard of Brain Death—New York City Health & Hospitals Corp. v. Sulsona, 29 Rutgers L. Rev. 485, 591 (1976).
- ²¹ See Legislation and Death, supra note 15, at 177-78 (confusion over determination of death under UAGA); text accompanying notes 22-28 *infra* (effect of different death standards on organ transplants).
- ²² See New York City Health & Hosp. Corp. v. Sulsona, 81 Misc. 2d 1002, 1005-06, 367 N.Y.S.2d 686, 689-90 (Sup. Ct. 1975) (expert testimony that kidneys from donors pronounced dead under common law standard have significantly greater incidence of post-operative failure than kidneys from donors declared brain dead); Comment, The Criteria for Determining Death in Vital Organ Transplants—A Medico-Legal Dilemma, 38 Mo. L. Rev. 220, 224 (1973) [hereinafter cited as Vital Organ Transplants] (physicians can maintain circulation of brain dead donor and increase probability of successful transplant); Stuart, Veith & Cranford, supra note 16, at 1-3 (organs of brain dead donors generally have not sustained destruction or deterioration).
- ²³ See Legislation and Death, supra note 15, at 178 (physician applying brain death standard can maintain vital functions artificially to preserve organs for transplant).

who is legally brain dead in a condition beneficial for transplantation purposes.²⁴

In a jurisdiction that relies solely on the common law standard, a physician seeking to remove a donor organ must await irreversible cessation of the patient's heartbeat and respiration before pronouncing death.²⁵ Consequently, under the traditional standard organs may deteriorate beyond the point of viability by the time a doctor pronounces the patient dead, thus significantly decreasing the probability of a successful transplant.²⁶ Although at least one court has held that doctors in a state that follows the common law approach can apply a brain death standard to determine the time of death for a prospective organ donor,²⁷ many physicians hesitate to declare a potential donor brain dead out of fear of criminal or civil liability.²⁸ The absence of a uniform determina-

²⁴ Id.; see Brain Death II, supra note 1, at 1744 (artificial maintenance of donor's circulation allows physicians to remove organs with minimal damage to organs); Stuart, Veith & Cranford, supra note 16, at 2 (continued ventilatory support permits retrieval of vital organs for transplant before organ deterioration).

²⁵ See Legislation & Death, supra note 15, at 177-78 (physician who must rely on common law definition may not remove organs until heart and lungs cease to function); Vital Organ Transplants, supra note 22, at 224 (transplant surgeon in common law jurisdiction must await cessation of heartbeat and respiration before removal of organ from donor).

²⁶ See Vital Organ Transplants, supra note 22, at 224 (since common law standard requires cessation of circulation, vital organs will begin to deteriorate before removal from donor's body); Stuart, Veith & Cranford, supra note 16, at 1-2 (greater deterioration in organs removed from donor after cessation of cardiorespiratory functions).

²⁷ See New York City Health and Hosp. Corp. v. Sulsona, 81 Misc. 2d 1002, 1007, 367 N.Y.S.2d 686, 691 (Sup. Ct. 1975). In Sulsona, the court noted the absence of a determination of death statute in New York. Id. at 1003, 367 N.Y.S.2d at 687-88. The Sulsona court emphasized the discrepancy between the medically accepted concept of brain death and the common law cardiorespiratory standard. Id., 367 N.Y.S.2d at 687-88. Reasoning that the New York legislature intended the state's version of the UAGA to encourage anatomical gifts, the Sulsona court concluded that the legislature implicitly authorized application of the accepted medical standard of death. Id. at 1007, 367 N.Y.S.2d at 691. The Sulsona court limited application of the brain death standard to organ transplantation but urged the New York legislature to enact a statutory determination of death standard. Id., 367 N.Y.S.2d at 691.

²⁸ See Brain Death II, supra note 1, at 1744 (potential liability of physician in common law state); Legislation and Death, supra note 15, at 178 & n.18 (physicians hesitant to perform transplants absent uniform statute authorizing brain death standard). Physicians in common law jurisdictions appear reluctant to pronounce prospective organ donors brain dead despite the provision in the UAGA that exempts from civil or criminal liability a person who acts in good faith pursuant to the UAGA. See UNIFORM ANATOMICAL GIFT ACT § 7(c); Legislation and Death, supra note 15, at 178. A physician who makes a good faith determination of death pursuant to § 7(b) of the UAGA arguably is exempt from liability under § 7(c). See id.

An unpublished Virginia case may have contributed to the reluctance of many physicians to act in the absence of a brain death statute. See Tucker's Administrator v. Lower, No. 2831 (Ct. Law & Eq., Richmond, Va., May 25, 1972), noted in Compton, Telling the Time of Human Death by Statute: An Essential and Progressive Trend, 31 WASH. & LEE L. REV. 521, 523-28 (1974) [hereinafter cited as Compton]. In Tucker, the brother of a transplant donor instituted a wrongful death action against several heart transplant surgeons who removed donor's heart and kidney after a neurologist had declared donor brain dead. See

tion of death standard that includes the brain death concept thus creates confusion in transplantation situations and limits the effectiveness of the UAGA.

In addition to affecting performance of organ transplants, the standard for determining the occurrence of death also is crucial in determining criminal and civil liability for the death of a person.²⁹ In states that do not apply a brain death standard, apprehension of a wrongful death action or malpractice suit deters many physicians from pronouncing the death of a patient with irreversible cessation of brain function, regardless of whether the patient is a prospective organ donor.30 Although no court has held a physician criminally liable for applying a brain death standard, a physician in a common law jurisdiction who terminates artificial means of support or removes a vital organ from a patient with continuing cardiorespiratory functions theoretically has committed homicide.31 Thus, the absence of a legally accepted brain death standard as a basis for determing death presents physicians with the dilemma of artificially prolonging the cardiorespiratory functions of a patient who is dead under medical standards or risking criminal or civil liability for complying with the standards that the medical profession accepts.

In addition to a physician's potential personal liability, the actions of a physician in the absence of a brain death standard may enable the per-

Compton, supra, at 524-5. Although Virginia had no determination of death statute at the time of the Tucker action, the Virginia legislature had enacted the UAGA. See VA. CODE §§ 32-364.3 to .11 (1950) (enacted 1970). The trial judge declined to authorize a brain death standard as a matter of law, but instructed the jury to consider the evidence in light of the possible criteria of death, including brain death. See Compton, supra, at 527-28 n.28. Although the jury returned a verdict in favor of the surgeons, presumably guided by the brain death instruction, other physicians may hesitate to declare a prospective organ donor dead under the UAGA alone. See Legislation and Death, supra note 15 (many physicians hesitate to perform transplant surgery in confusion over determination of death under UAGA).

- ²⁹ See Legislation and Death, supra note 15, at 177; text accompanying notes 30-34 infra.
- ³⁰ See Capron and Kass, supra note 7, at 97-98 (medical profession's concern with potential civil or criminal liability in the absence of statutory provision); Victor, supra note 9, at 51 (physicians may fear criminal or civil liability for actions taken in absence of statutory standards). Cf. Tucker's Administrator v. Lower, No. 2831 (Ct. Law & Eq., Richmond, Va., May 25, 1972) noted in Compton, supra note 28 (jury verdict in favor of defendant surgeons in wrongful death action); note 28 supra (discussing Tucker).
- ³¹ See Eichner v. Dillon, 73 A.D.2d 431, 450, 426 N.Y.S.2d 517, 533 (1980) (dictum) (physician who removes life sustaining devices absent authorization arguably commits homicide), modified, 52 N.Y.2d 363, 420 N.E.2d 64, 438 N.Y.S.2d 266 (1981); Guthrie, supra note 2, at 58 (although no physician yet held criminally liable for applying brain death standard, action in absence of legal standard theoretically homicide); Vital Organ Transplants, supra note 22, at 231 (statement of Deputy District Attorney of Los Angeles that under common law standard, removal of vital organ from donor who has not suffered cessation of heartbeat, respiration and brain function theoretically is murder).

son who initially injured the patient to escape liability.³² Defendants in homicide or wrongful death actions may argue that termination of artificial support devices which maintained the victim's cardiorespiratory functions caused the victim's death or broke the causal chain between defendant's action and the victim's death.³³ Since a person's liability for his or her wrongful actions should not rest upon the definition of death applied in the jurisdiction in which the act occurred,³⁴ the acceptance of a determination of death standard uniform among the states is essential.

The absence of a uniform standard for determining death also may affect resolution of property right disputes.³⁵ The occurrence of death controls when the heirs or legatees of a decedent are entitled to receive their shares of the decedent's estate.³⁶ In addition, time of death deter-

³² See generally Guthrie, supra note 2, at 50-57. Although no defendant successfully has asserted that the intervening acts of a physician caused the victim's death, arguably a physician risks civil or criminal liability for terminating artificial support devices. See id. at 51; cf. Parker v. United States, 406 A.2d 1275, 1279-80 (D.C. 1979) (defendant entitled to instruction that physician's actions were intervening cause of victim's death only if evidence introduced of intentional or willful malpractice or abnormal response).

³³ See, e.g., Arizona v. Fierro, 124 Ariz. 182, _____, 603 P.2d 74, 76 (1979) (defendant appealed first degree murder conviction, arguing that physician's termination of artificial support caused victim's death and thus insufficient evidence of defendant's guilt existed); People v. Saldana, 47 Cal. App. 3rd 954, 958, 121 Cal. Rptr. 243, 245 (1975) (defendant challenged second degree murder conviction on ground that removal of respirator was the unforeseeable intervening cause of death); Commonwealth v. Golston, 373 Mass. 249. 366 N.E.2d 744, 748 (1977), cert. denied, 434 U.S. 1039 (1978). In Golston, for example, the trial court instructed the jury that proof beyond a reasonable doubt of brain death satisfied the essential element of death in a homicide charge. Id. at _____, 366 N.E.2d at 747. Since Massachusetts had no brain death statute, defendant relied on the common law definition of death to challenge his first degree murder conviction. Id. at _____, 366 N.E.2d at 748. Defendant argued that if the doctors had not disconnected the respirator, the victim might have continued to exhibit cardiorespiratory functions more than a year and a day after defendant's attack, thus exempting defendant from criminal liability under the common law __, 366 N.E.2d at 748; see Commonwealth v. Vanetzian, 350 rule in Massachusetts. Id. at ___ ___, 215 N.E.2d 658, 660 n.1 (common law rule in Massachusetts that to constitute criminal homicide, victim must die within a year and a day of infliction of mortal wound). The Golston court rejected defendant's arguments, adopting the standard of the Uniform Brain Death Act. 373 Mass. at _____, 366 N.E.2d at 749; see Uniform Brain DEATH ACT (person who sustains irreversible cessation of total brain function, including brain stem, is dead) (superseded 1980 by Uniform Determination of Death Act). See generally Guthrie, supra note 2, at 50-54.

A person's liability for his or her wrongful actions depends on the substantive law of the state where the act occurred. See Bigelow v. Virginia, 421 U.S. 809, 823-25 (1975) (law of state where activity occurred determines whether conduct wrongful); Huntington v. Attrill, 146 U.S. 657, 669 (1892) (only courts of state where criminal act occurred may try violations of state's criminal law). Since all states proscribe the wrongful killing of a person, however, a person's culpability for his or her act should not depend upon whether or not the forum state applies the brain death standard or the cardiorespiratory standard.

³⁵ See text accompanying notes 36-41 infra.

²⁶ See, e.g., Spotts v. Spotts, 331 Mo. 917, _____, 55 S.W. 2d 977, 984 (1932) (no one entitled to inherit from person until death of that person); Ware v. Beach, 322 P.2d 635, 639

mines which persons will inherit from the decedent.³⁷ The exact time of death is crucial particularly when the devolution of property depends upon the order of death and the determination of survivorship.38 Since courts that address survivorship issues typically accept the slightest evidence indicating survival, the definition of death applied in the particular jurisdiction is crucial.39 Under the common law cardiorespiratory standard of death, a person theoretically survives another if his or her heart beats once more than that of the other decedent.40 Thus, in a common law state a brain dead person whose cardiorespiratory functions are maintained artificially arguably survives a fellow victim of the common disaster whose cardiorespiratory functions are not maintained. In a state that applies a brain death standard, however, courts presumably will regard time of death for survivorship purposes as the time when brain death occurred. Consequently, a uniform system for determining death would clarify survivorship and other inheritance problems and avoid inconsistent outcomes resulting from different standards.

In addition to simplifying inheritance problems, a uniform determination of death standard would aid resolution of insurance claims. Many insurance policies contain provisions that entitle the beneficiary to

(Okla.) (property descends upon death and rests in legatees and heirs), cert. denied, 358 U.S. 819 (1958).

³⁷ See, e.g., In re Murphy's Estate, 157 Cal. 63, ______, 106 P. 230, 232 (1910) (where devise made to class, class members who survive testator take devise); Harris Trust & Savings Bank v. Jackson, 412 Ill. 261, ______, 106 N.E. 2d 188, 192 (1952) (heirs of person determined as of time of death of that person).

³⁸ See, e.g., Smith v. Smith, 229 Ark. 579, ______, 317 S.W. 2d 275, 276 (1968) (construction of wills of husband and wife killed in common accident); In re Estate of Schmidt, 67 Cal. Rptr. 847, 848 (1968) (proceeding to determine heirship); Thomas v. Anderson, 96 Cal. App. 2d 371, _____, 215 P.2d 478, 479 (1970) (action to quiet title where joint tenants died close in time); Legislation and Death, supra note 15, at 179 (devolution of property subject to joint tenancy may depend on whether joint tenants died simultaneously). To resolve issues of survivorship in cases of common disasters, when order of death is difficult to determine, most states have adopted the Uniform Simultaneous Death Act. Uniform Simultaneous Death Act; see, e.g., Cal. Prob. Code §§ 296-296.8 (West 1956); Miss. Code Ann. §§ 91-3-1 to -15 (1972); N.Y. Est., Powers & Trusts Law § 2-1.6 (1981); Va. Code §§ 64.1-97 to -104 (1950). The Uniform Simultaneous Death Act provides that if insufficient evidence exists to show that persons did not die simultaneously, the property of each decedent passes as though he or she survived the other decedent. Uniform Simultaneous Death Act § 1; see text accompanying note 39 infra (courts typically accept slightest evidence of survival).

³⁹ See, e.g., In re Estate of Rowley, 275 Cal. App. 2d 324, ______, 65 Cal. Rptr. 139, 143-45 (1967) (court accepts expert testimony that one victim survived the other by 1/150,000 of a second); Gray v. Sawyer, 247 S.W.2d 496, 497 (Ky. 1952) (where husband and wife struck and killed by train, evidence that blood spurted from decapitated wife's neck for several moments established that wife survived husband); Hirsh, supra note 9, at 391 (courts applying common law standard accept slightest evidence of continued vital functions to establish survivorship); Vital Organ Transplants, supra note 22, at 229 (same).

⁴⁰ See Gray v. Sawyer, 247 S.W.2d 496, 497 (Ky. 1952) (although person decapitated, not dead as long as spurts of blood indicate heart pumping).

⁴¹ See text accompanying notes 42-44 infra.

the insurance proceeds only if the death of the insured occurs within a specified period of time after the accident.⁴² The use of artificial support devices may prolong the cardiorespiratory functions of a person who otherwise would have died within the specified period. In a jurisdiction that applies the common law standard, an insurance company legally can withhold payment of the insurance proceeds if cardiorespiratory functions artificially continue beyond the prescribed time limit.⁴³ In a state that permits application of a brain death standard, however, physicians could pronounce the death of a patient who suffered irreversible cessation of brain function within the specified period.⁴⁴ Thus, adoption of a uniform determination of death standard that applies the brain death concept when artificial support devices maintain a patient's cardiorespiratory functions would eliminate the disparate treatment of insurance proceeds depending on the death standard applied in the particular jurisdiction.

Because of the widespread importance of a determination of death, an effective standard requires application uniform throughout the United States. Currently no consensus exists among the states concerning the determination of death.⁴⁵ Thirty-three states authorize at least limited application of a brain death standard.⁴⁶ Of the thirty-three states, the legislatures of twenty-seven states have codified brain death standards,⁴⁷ and the courts of the remaining six states have sanctioned use of

 $^{^{42}}$ See Legislation and Death, supra note 15, at 179 & n.23 (typical limit in accidental death provisions).

legally can withhold payment if insured is maintained on respirator beyond 90 day period); Cf. Douglas v. Southwestern Life Ins. Co., 374 S.W. 2d 788, 793-94 (Tex. Civ. App. 1964). Douglas involved an action to recover accidental death benefits under an insurance policy. Id. at 790. The insurance policy provided for double indemnity in the event of accidental death if death occurred within 90 days of the accident. Id. Although physicians testified that decedent would have died within 90 days without the use of artificial support devices, the court refused to award the accidental death benefits because death actually occurred 120 days after the accident. Id. at 793. Although the record in Douglas fails to indicate whether the deceased insured would have fulfilled the criteria of brain death, the case illustrates the potential treatment of insurance proceeds in a state that regards death exclusively as cessation of cardiorespiratory functions. See id. at 790, 793-94.

[&]quot; See Legislation and Death, supra note 15, at 180 (adoption of brain death standard allows determination of death within 90 day period under insurance contracts).

⁴⁵ See text accompanying notes 46-49 infra.

⁴⁶ See text accompanying notes 47-48 infra.

⁴⁷ See Ala. Code § 22-31-1 to -4 (Supp. 1981); Alaska Stat. § 09.65.120 (Supp. 1981); Ark. Stat. Ann. § 82-537 (Supp. 1981); Cal. Health & Safety Code § 7180 (West Supp. 1981); Conn. Gen. Stat. Ann. § 19-139(i)(b) (West Supp. 1981); Fla. Stat. Ann. § 382.085 (Supp. 1981); Ga. Code Ann. § 88-1715.1 (1979); Hawaii Rev. Stat. § 327C-1 (Supp. 1979); Idaho Code § 54-1819 (Supp. 1981); Ill. Ann. Stat. ch. 110 1/2, § 302(b) (Smith-Hurd 1978); Iowa Code § 702.8 (1979); Kan. Stat. Ann. § 77-202 (Supp. 1981); La. Rev. Stat. Ann. § 9:111 (West. Supp. 1981); Md. Ann. Code, art. 43, § 54F (1980); Mich. Comp. Laws § 333.1021 (1980); Miss. Code Ann. § 41-36-3 (Supp. 1981); Mont. Rev. Codes Ann. § 50-22-101 (1979); Nev. Rev. Stat. § 451.007 (1979); N.M. Stat. Ann. § 12-2-4 (1978); N.C. Gen. Stat. § 90-323

brain death determinations.⁴⁸ In states that neither legislatively nor judicially have approved a brain death standard, the common law cardiorespiratory standard presumably continues to apply.⁴⁹ To achieve a definition of death uniform throughout the United States, all states should adopt determination of death standards consistent with standards that all other states apply.

To achieve uniform treatment by the states, a determination of death standard applicable for all purposes requires statutory enactment rather than judicial adoption. An effective determination of death standard must apply generally in all situations to provide legal certainty. Since most courts define death only in the context of the action before them, 50 judicial resolution of determination of death issues may result in varying definitions of death. 51 Thus, judicial standards adopted in one situation provide little or no guidance for a physician to determine death in another context. 52 In addition, judicial adoption of determination of death standards fails to provide an immediate solution to determination

(1981); OKLA. STAT. ANN. tit. 63, § 1-301(g) (West Supp. 1981); OR. REV. STAT. § 146.087 (1980); TENN. CODE ANN. § 53-459 (1977); TEX. REV. CIV. STAT. ANN., art. 4447t (Vernon Supp. 1981); VA. CODE § 54-325.7 (Supp. 1981); W. VA. CODE § 16-10-2 (Supp. 1981); Wyo. STAT. § 35-19-101 (Supp. 1981).

- "See Arizona v. Fierro, 124 Ariz. 182, _____, 603 P.2d 74, 77-78 (1979) (adoption of Uniform Brain Death Act); Lovato v. District Court, 198 Colo. 418, ____, 601 P.2d 1072, 1081 (1979) (adoption of Uniform Brain Death Act); Swafford v. State, ____ Ind. ____, 421 N.E.2d 596, 602 (1981) (adoption of Uniform Determination of Death Act); Commonwealth v. Golston, 373 Mass. 249, ____, 366 N.E.2d 744, 748-49 (1977) (adoption of brain death standard), cert. denied, 434 U.S. 1039 (1978); New York City Health & Hosp. Corp. v. Sulsona, 81 Misc. 2d 1002, 1007, 367 N.Y.S.2d 686, 691 (Sup. Ct. 1975) (adoption of brain death standard for transplantation purposes); In re Welfare of Bowman, 94 Wash. 2d 407, 421, 617 P.2d 731, 738 (1980) (adoption of Uniform Determination of Death Act); notes 84-87 infra (Uniform Determination of Death Act).
- ⁴⁹ See Dornette, supra note 16 (common law standard presumably applies in jurisdictions without statutory definitions of death).
- ⁵⁰ See New York City Health & Hosp. Corp. v. Sulsona, 81 Misc. 2d 1002, 1007, 367 N.Y.S.2d 686, 691 (Sup. Ct. 1975) (defining death only for purpose of UAGA); Legislation and Death, supra note 15, at 183 (courts only bound to resolve particular question presented).
- ⁵¹ See Legislation and Death, supra note 15, at 174-75 (judicial definitions of death may vary depending on facts of particular case).
- See Capron & Kass, supra note 7, at 96; Jacobson, Anderson & Speigel, Towards a Statutory Definition of Death in Illinois, 14 J. Mar. L. Rev. 701, 709 (1981) (judicial resolution of determination of death issue provides no guidance in other situations) [hereinafter cited as Jacobson, Anderson & Speigel]. A physician's choice of action in a situation that a court in the physician's jurisdiction has not addressed may rest more on the physician's willingness to test his or her position in court than on actual merits of each course of action. See Capron & Kass, supra note 7, at 96 & n.33. For example, in New York, which applies a brain death standard only in transplant situations, a physician arguably risks criminal or civil liability if the doctor terminates artificial support of a brain dead person who is not an organ donor. See New York City Health & Hosp. Corp. v. Sulsona, 81 Misc. 2d 1002, 1007, 367 N.Y.S.2d 686, 691 (brain death standard for transplant purposes); text accompanying notes 30 & 31 supra (possible civil or criminal liability for physicians who apply brain death standards without statutory or judicial authorization).

of death questions since courts generally await litigation to address separate determination of death issues.⁵³ Moreover, courts that adopt a new standard which applies for all purposes are subject to criticism for exceeding the proper bounds of judicial action.⁵⁴ Finally, although the doctrine of stare decisis arguably binds courts to follow judicially adopted determination of death standards,⁵⁵ physicians often are reluctant to rely on judicially authorized standards.⁵⁶ Consequently, legislation establishing determination of death standards provides a more concrete basis on which physicians may act than judicial decisions.

The present legislative approaches of states to the determination of death fall within three general categories.⁵⁷ Seven states follow the "alternative" approach, which provides that death occurs when a patient either suffers irreversible cessation of spontaneous cardiorespiratory function or sustains irreversible cessation of spontaneous brain function.⁵⁸ The Kansas definition of death statute,⁵⁹ for example, preserves the common law standard but permits a physician applying ordinary medical standards to declare a person dead based on total cessation of brain function.⁵⁰ The Kansas statute and other statutes that apply the alternative approach fail to specify when a physician must apply each standard.⁶¹ Consequently, the alternative approach arguably

ss See New York City Health & Hosp. Corp. v. Sulsona, 81 Misc.2d 1002, 1007, 367 N.Y.S.2d 686, 691 (Sup. Ct. 1975) (adopts brain death standard only in context of organ transplants and urges legislature to enact state-wide remedy to determination of death issue); Capron & Kass, supra note 7, at 96 (case law approach to establishing death standards involves delay); Legislation and Death, supra note 15, at 183 (courts slow in attempts to define death).

⁵⁴ See Jacobson, Anderson & Speigel, supra note 52, at 709 (courts that actually have adopted new definitions of death beyond specific context of case before them criticized for exceeding proper scope of judicial action).

⁵⁵ See, e.g., Hertz v. Woodman, 218 U.S. 205, 210 (1910) (courts generally follow prior holding on same legal problem although doctrine flexible); Cenven, Inc. v. Bethlehem Steel Corp., 41 N.Y.2d 842, 843, 393 N.Y.S.2d 700, 700, 362 N.E.2d 251, 252 (1977) (court should not depart from doctrine of stare decisis absent compelling circumstances).

⁵⁶ See Brain Death II, supra note 1, at 1744 (case law subject to appeal and subsequent judicial action); Legislation and Death, supra note 15, at 196-97 (judicial decisions fail to provide concrete basis on which physicians can rely).

structure of death). structure of structure

⁵⁸ IDAHO CODE § 54-1819 (Supp. 1981) (Uniform Determination of Death Act); KAN. STAT. ANN. § 77-202 (Supp. 1981); MD. ANN. CODE, art. 43, § 54F (1980); MISS. CODE ANN. § 41-36-3 (1981) (Uniform Determination of Death Act); N.M. STAT. ANN. § 12-2-4 (1978); OR. REV. STAT. § 146.001 (Supp. 1981); VA. CODE § 54-325.7 (Supp. 1980); Selby & Selby, supra note 3, at 535-36 (discussing alternative definition approach).

⁵⁹ KAN. STAT. ANN. § 77-202 (Supp. 1981).

⁶⁰ *Id.* The Kansas statute provides that a person is dead when he or she either lacks spontaneous cardiac and respiratory function or lacks spontaneous brain function. *Id.*

⁶¹ See generally Idaho Code § 54-1819 (Supp. 1981); Kan. Stat. Ann. § 77-202 (Supp. 1981); Md. Ann. Code, art. 43, § 54F (1980); Miss. Code Ann. § 41-36-3 (1981); N.M. Stat. Ann. § 12-2-4 (1978); Or. Rev. Stat. § 146.001 (Supp. 1981); Va. Code § 54-325.7 (Supp. 1980).

suggests the existence of two distinct phenomena of death that occur at separate points in time.⁶² Moreover, if the brain death standard specificially refers to transplantation of organs, the alternative type statute may appear to authorize a separate, earlier time of death when the patient is a potential organ donor.⁶³ The requirement that physicians base determinations of death on ordinary medical standards, however, arguably restrains a physician's discretion in deciding which standard to apply.⁶⁴ The alternative approach permits a physician to respond to different medical conditions by providing two procedures for determining the occurrence of death.⁶⁵ In addition, the alternative approach preserves some medical flexibility by anticipating that advances in medical technology may affect ordinary medical procedures for determining death.⁶⁶

A second legislative approach to the determination of death, which prevails in eight states,⁶⁷ also provides alternative standards for determining death.⁶⁸ The second approach, however, indicates under which circumstances each standard applies.⁶⁹ Statutes applying the second approach typically provide that death occurs upon irreversible cessation of cardiorespiratory function unless artificial support systems maintain respiration and heart beat, in which case death occurs upon irreversible

⁶² See Capron & Kass, supra note 7, at 109 (alternative definitions create misconception that two separate phenomena of death exist); Kennedy, The Kansas Statute on Death—An Appraisal, 285 New Eng. J. Med. 946, 947-48 (1971) [hereinafter cited as Kennedy] (alternative standards suggest two types of death).

⁶⁹ See Capron & Kass, supra note 7, at 109-110 (alternative definitions apparently intended to establish special definition of death for organ transplantations); Kennedy, supra note 62, at 947-48 (purpose of alternative definitions is to facilitate transplant surgery); Selby & Selby, supra note 3, at 535-36 (alternative definitions may permit physicians to pronounce prospective organ donors dead at earlier point than non-donors).

⁶⁴ See Legislation and Death, supra note 15, at 186-87 (provision requiring application of ordinary medical standards imposes limits on physician's discretion in determining death).

⁶⁵ See id. Pronouncing death based on cessation of heartbeat and respiration continues to be a common and reliable means of determining death in most cases. See Brain Death II, supra note 1, at 1748. In cases in which a physician can determine death based on the traditional criteria, requiring a physician to perform the more complex tests necessary to establish brain death wastes time and resources. See Legislation and Death, supra note 15, at 190.

⁶⁶ See Legislation and Death, supra note 15, at 186-87 (alternative approach allows medical profession to perform determinations of death according to medical advances).

⁶⁷ See Ala. Code § 22-31-1 (Supp. 1981); Alaska Stat. § 09.65.120 (Supp. 1981); Fla. Stat. Ann. § 382.085 (Supp. 1981); Hawah Rev. Stat. § 327C-1 (Supp. 1979); Iowa Code § 702.8 (1979); La. Rev. Stat. Ann. § 9:111 (West Supp. 1981); Mich. Comp. Laws § 333.102 (1980); Tex. Rev. Civ. Stat. Ann. art. 4447t (Vernon Supp. 1981).

ss See Capron & Kass, supra note 7, at 111. The second statutory approach to the determination of death is based upon the model that Capron and Kass proposed. Id.; see, e.g., Selby & Selby, supra note 3, at 536 (Capron-Kass model); Brain Death II, supra note 1, at 1747 (second approach suggested by Capron and Kass).

⁶⁹ See Capron & Kass, supra note 7, at 111 (brain death standard applies only when artificial support devices preclude application of cardiorespiratory standard); text accompanying note 70 infra.

cessation of brain function.⁷⁰ Although statutes following the second approach appear to limit the discretion of the physician by providing that the brain death standard applies only when artificial support mechanisms preclude application of the cardiorespiratory standard, the restriction arguably is redundant and misleading.⁷¹ Since the medical profession considers absence of spontaneous respiration a criterion for brain death,⁷² ordinary medical standards limit application of the brain death standard to patients with artificially maintained cardiorespiratory functions.⁷³ Thus, the statutory limitation on when physicians may apply each standard appears unnecessary.

The third determination of death approach, which twelve state legislatures have adopted, applies a brain death standard. Some states exclusively apply a strict brain death standard, requiring irreversible cessation of brain function to determine death. Other state statutes provide that death occurs upon irreversible cessation of brain function but note that the statutory standard does not preclude application of other medically accepted standards. Defining death exclusively as

To See Ala. Code § 22-31-1 (Supp. 1981); Alaska Stat. § 09.65.120 (Supp. 1981); Fla. Stat. Ann. § 382.085 (Supp. 1981); Hawaii Rev. Stat. § 327C-1 (Supp. 1979); Iowa Code § 702.8 (1979); La. Rev. Stat. Ann. § 9:111 (West Supp. 1981); Mich. Comp. Laws § 333.1021 (1980); Tex. Rev. Civ. Stat. Ann., art. 4447t (Vernon Supp. 1981).

ⁿ See Lovato v. District Court: The Dilemma of Defining Death, 58 Den. L.J. 627, 633-34 (1981) [hereinafter cited as Dilemma] (statutes providing that brain death standard applies only in event cardiorespiratory functions artificially maintained are inaccurate and redundant); text accompanying notes 72 & 73 infra (ordinary medical standards limit physician's discretion in applying brain death standard).

⁷² See, e.g., Harvard Committee, supra note 8, at 337 (absence of spontaneous respiration is criterion of irreversible coma); Collaborative Study, An Appraisal of the Criteria of Cerebral Death: A Summary Statement, 237 J.A.M.A. 982, 982-84 (brain death criteria include absence of spontaneous respiration); Victor, supra note 9, at 49 (absence of spontaneous respiration common prerequisite for brain death in all medical proposals). See generally Black, supra note 12.

⁷⁸ See Dilemma, supra note 71, at 634 (no need to enumerate statutorily requirement of absence of spontaneous respiration since medical profession regards lack of spontaneous respiration criterion of brain death).

⁷⁴ See Ark. Stat. Ann. § 82.537 (Supp. 1981); Cal. Health & Safety Code § 7180 (West Supp. 1981); Conn. Gen. Stat. Ann. § 19-139i(b) (West Supp. 1981); Ga. Code Ann. § 88-1715 (1979); Ill. Ann. Stat. ch. 110 1/2, § 302(b) (Smith-Hurd 1978) (only applies to UAGA); Mont. Rev. Codes Ann. § 50-22-101 (1979); Nev. Rev. Stat. § 451.007 (1979) (Uniform Brain Death Act); N.C. Gen. Stat. § 90-323 (1981); Okla. Stat. Ann. tit. 63 § 1-301(g) (West. Supp. 1981); Tenn. Code Ann. § 53-459 (1977); W. Va. Code § 16-10-2 (Supp. 1981) (Uniform Brain Death Act); Wyo. Stat. § 35-19-101 (Supp. 1981). See also note 48 supra (states that judicially have adopted brain death standard).

⁷⁵ See Legislation and Death, supra note 15, at 189-90 (brain death approach).

⁷⁶ See Ark. Stat. Ann. § 82-537 (Supp. 1981); Ill. Ann. Stat. ch. 110 1/2, § 302(b) (Smith-Hurd 1978); Mont. Rev. Codes Ann. § 50-22-101 (1979); Nev. Rev. Stat. § 451.007 (1979); Okla. Stat. Ann. tit. 63, § 1-301(g) (West Supp. 1981); Tenn. Code Ann. § 53-459 (1977); W. Va. Code § 16-10-2 (Supp. 1981); Wyo. Stat. § 35-19-101 (Supp. 1981).

T See Cal. Health & Safety Code § 7180 (West Supp. 1981); Conn. Gen. Stat. Ann. § 19-139(i)(b) (West Supp. 1981); Ga. Code Ann. § 88-1715 (1979); N.C. Gen. Stat. § 90-323 (1981). See also State v. Fierro, 124 Ariz. 182, ______, 603 P.2d 74, 77-79 (1979) (common law)

brain death, however, suggests that physicians must determine the death of each patient under the brain death standard even though the traditional standard conclusively establishes death in most patients. Thus, a strict brain death standard may prevent a physician from varying procedures according to the particular circumstances. In addition, strict brain death statutes lack flexibility in the event of advances in medical technology. Brain death statutes that do not preclude use of other medically accepted standards to determine death permit a physician to act according to the circumstances of each case and preserve flexibility in the event of medical or technological advances. Although non-preclusive brain death statutes arguably suggest that alternative definitions of death exist, the statutes merely permit a physician to apply in each situation the ordinary medical procedures for determining death.

Examination of the variety of statutorily and judicially adopted state approaches emphasizes the desirability of uniform treatment of the determination of death.⁸³ The Uniform Determination of Death Act⁸⁴ (UDODA), drafted by the American Bar Association (ABA), the American Medical Association (AMA), and the NCCUSL, represents an attempt to establish a uniform determination of death standard for all

definition still sufficient to establish death despite adoption of brain death standard); Lovato v. District Court, 198 Colo. 418, _____, 601 P.2d 1072, 1081 (1979) (adoption of Uniform Brain Death Act does not preclude continuing recognition of common law standard).

- ¹⁸ See, e.g., Selby & Selby, supra note 3, at 537 (statute suggesting exclusive application of brain death standard fails to recognize that common law standard adequate in most cases); Dilemma, supra note 71, at 634 (strict brain death standard may create false impression that each death must be determined by brain death criteria); Legislation and Death, supra note 15, at 190 (strict brain death standard fails to allow for any variance of procedure depending on circumstances).
- ⁷⁹ See Legislation and Death, supra note 15, at 190; note 65 supra (requirement that physicians perform more complicated brain death procedures when traditional procedures conclusively establish death is an unnecessary waste of time and resources). Many physicians, particularly small town and rural practitioners, have neither the access to equipment required to perform brain death procedures nor the opportunity to learn to operate the equipment. See Legislation and Death, supra note 15, at 190. Since the common law standard is conclusive in most cases, requiring that physicians apply the brain death standard in all cases appears inappropriate. Id.
 - 80 See Legislation and Death, supra note 15, at 190-91.
- ⁸¹ See id. If a brain death statute authorizes a physician to determine death pursuant to customary standards of medical practice, physicians probably will apply the traditional standard when appropriate. See Selby & Selby, supra note 3, at 537.
- ⁸² See Dilemma, supra note 71, at 634 (nonpreclusive brain death statutes may suggest alternative definitions of death); Legislation and Death, supra note 15, at 190 (allowing use of customary procedures in addition to brain death standard essentially the same as alternative approach); cf. text accompanying notes 58-66 supra (alternative approach).
 - 83 See text accompanying notes 58-82 supra (various state approaches).
- ⁸⁴ UNIFORM DETERMINATION OF DEATH ACT (UDODA). Four states have adopted the UDODA. See Swafford v. State, _____ Ind. _____, 421 N.E.2d 596, 602 (1981); In re Bowman, 94 Wash. 2d 407, 421, 617 P.2d 731, 738 (1980); IDAHO CODE § 54-1819 (Supp. 1981); MISS. CODE ANN. § 41-36-3 (Supp. 1981); text accompanying notes 122-24 infra (state adoption of UDODA).

legal and medical purposes.⁸⁵ Paralleling alternative type statutes in structure and substance, the UDODA codifies the common law cardiorespiratory basis of determining death, which effectively diagnoses most deaths.⁸⁶ Similarly, the UDODA recognizes that irreversible cessation of total brain function provides a medically accepted basis for determining death when artificial maintenance of cardiorespiratory functions precludes application of the common law standard.⁸⁷ Although the existence of alternative standards arguably suggests that two separate phenomena of death exist, the UDODA actually recognizes alternative procedures for determining when the single phenomenon of death has occurred.⁸⁸ In providing alternative procedures, however, the UDODA does not confer unlimited discretion on physicians.⁸⁹ Although the statutory language of the UDODA does not specify that the brain death standard applies only when artificial means of support preclude application of the cardiorespiratory standard, the Act does require that a physi-

⁸⁵ See Commissioners' Prefatory Note, Uniform Determination of Death Act [hereinafter cited as Commissioners' Note]. The UDODA is a unique co-operative effort, representing the consensus of the ABA, the AMA, and the NCCUSL. Id.; see McCabe, The New Determination of Death Act, 67 A.B.A.J. 1476, 1476 (1981) [hereinafter cited as Mc-Cabel. In 1975, the ABA Law and Medicine Committee suggested a Model Definition of Death Act, which presented a definition of death based on irreversible cessation of total brain function. ABA MODEL DEFINITION OF DEATH ACT; see Selby & Selby, supra note 3, at 537. Influenced by the earlier ABA model, the NCCUSL adopted the Uniform Brain Death Act (UBDA) in 1978. See Uniform Brain Death Act (superseded 1980 by Uniform Deter-MINATION OF DEATH ACT): McCabe, supra at 1476. The UBDA also established a death standard based on irreversible cessation of total brain function, but emphasized that the standard included cessation of brain stem function. Uniform Brain Death Act § 1 (superseded 1980 by UNIFORM DETERMINATION OF DEATH ACT). In 1979, the AMA approved a Model Determination of Death statute that allowed a physician to base determinations of death on accepted medical standards, including irreversible cessation of total brain function. AMA MODEL DETERMINATION OF DEATH ACT; see Selby & Selby, supra note 3, at 538. Recognizing the necessity of a uniform standard for determining death, representatives of the ABA, AMA, and NCCUSL attempted to find language common to the models. See McCabe, supra, at 1476; Commissioners' Note, supra. The UDODA, which contains language common to the various model statutes, thus represents the agreement of the legal and medical professions on an appropriate determination of death standard. See McCabe, supra at 1476; Commissioners' Note, supra.

⁸⁶ UNIFORM DETERMINATION OF DEATH ACT § 1(1); see Commissioners' Note, supra note 85 (UDODA codifies common law basis for determining death); cf. text accompanying note 58 supra (alternative approach).

⁵⁷ UNIFORM DETERMINATION OF DEATH ACT § 1(2); see Commissioners' Note, supra note 85 (alternative procedures provided for determining death when artificial means of support prevent application of traditional standards); cf. text accompanying note 58 supra (alternative approach).

⁸⁸ See Uniform Determination of Death Act § 1; Commissioners' Note, supra note 85 (alternative procedures for determining when death has occurred); text accompanying notes 61-64 supra (alternative approach suggests two types of death but actually establishes two procedures for determining death).

so See text accompanying notes 64 & 65 supra (discretion of physicians limited by requirement that physicians determine death pursuant to ordinary medical standards).

cian determine death according to accepted standards of medical practice. The medical profession generally agrees that physicians may base determinations of death upon irreversible cessation of brain function only when artificial support devices maintain a patient's cardiorespiratory functions. Thus, the UDODA failure to specify when the alternative procedures apply is immaterial, since accepted medical standards indicate when the brain death standard applies. 22

By providing that accepted medical standards regulate determinations of death, the UDODA reconciles the need for cognizable legal and medical standards with the need for adaptability to scientific changes.⁹³ The UDODA establishes a general legal standard for determining death but recognizes that the medical profession must formulate the appropriate criteria for determining when a patient satisfies the general standard.⁹⁴ Since medical and technological advances will continue to improve criteria for determining death, codifying specific criteria poses the risk of perpetuating inflexible and outmoded tests when better techniques arise.⁹⁵ Thus, the UDODA satisfies the legal preference for certainty by providing a general standard of when a person is medically and legally dead.⁹⁶ In addition, the UDODA avoids rigidity by anticipating medical

⁹⁰ See Uniform Determination of Death Act § 1; cf. text accompanying notes 68-70 supra (statutes based on Capron & Kass model specify when physicians may apply alternative standards).

 $^{^{91}}$ See generally Black, supra note 12; Harvard Committee, supra note 8; Refinements, supra note 4.

⁹² See Legislation and Death, supra note 15, at 186-7 (ordinary medical standards limit physician's discretion in determining which standard to apply); text accompanying note 64 supra (same).

⁹³ See Uniform Determination of Death Act § 1; McCabe, supra note 85, at 1478 (UDODA intended to provide general standard and to permit extension of diagnostic techniques resulting from medical achievements); Commissioners' Note, supra note 85 (purpose of UDODA to extend common law to encompass new techniques for determining death); text accompanying notes 64 & 65 supra (alternative standards permit physicians to respond to different medical conditions and advances in medical technology); notes 94-97 infra (UDODA establishes general legal standard but provides for changes in medical technology).

²⁴ See Uniform Determination of Death Act § 1; McCabe, supra note 85, at 1478. The UDODA establishes the general standard under which physicians may determine death but does not incorporate specific medical criteria. See Uniform Determination of Death Act § 1; McCabe, supra note 85, at 1478. Although the drafters of the UDODA considered the adequacy of specific medical criteria and tests before approving the general physiological standards in the Act, the drafters recognized the inadvisability of legislating specific medical criteria for determining when a patient meets the particular standard because of the possibility of improved criteria. See McCabe, supra note 85, at 1478; Commissioners' Note, supra note 85.

⁹⁵ See Capron & Kass, supra note 7, at 103, 108, 113 (need for flexibility in event of medical advances argument against legislating specific criteria or tests); McCabe, supra note 85, at 1478 (incorporating criteria into statutes poses risk that statute will require application of outmoded criteria); Legislation and Death, supra note 15, at 190-91 (legislature should avoid rigidity in statute by drafting statute to allow for advances in medical technology).

⁹⁶ See Uniform Determination of Death Act § 1.

development of improved techniques for diagnosing when patients fulfill the medico-legal standard.97

In establishing the general physiological standards for determining death, the UDODA conforms with the prevailing medical view that brain death involves irreversible cessation of total brain function. Moreover, the UDODA avoids potential problems underlying less specific brain death standards by emphasizing that the entire brain, including the brain stem, irreversibly must cease to function before a physician may pronounce death under the brain death standard. Failure of brain death standards specifically to include irreversible destruction of the brain stem arguably suggests that a physician may pronounce the death of a person who, because of continuing brain stem function, is in a persistent vegetative state. A severely brain damaged patient who retains brain stem function, however, may continue to exhibit spontaneous cardiorespiratory activities. Requiring irreversible termination of brain

⁹⁷ See UNIFORM DETERMINATION OF DEATH ACT § 1; McCabe, supra note 85, at 1478 (UDODA avoids incorporating specific criteria and permits limited extension of diagnostic techniques resulting from medical advances).

^{**} See Uniform Determination of Death Act § 1; McCabe, supra note 85, at 1478 (nearly universal agreement that death occurs when brain irreversibly and totally ceases to function); Commissioners' Note, supra note 85 ("neocortical death" and "persistent vegetative state" not considered valid legal or medical bases for determining death); text accompanying notes 11-12 supra (medical profession accepts irreversible cessation of total brain function as death). See generally, Black, supra note 12; Harvard Committee, supra note 8, Refinements, supra note 4.

⁹⁹ See Uniform Determination of Death Act § 1; McCabe, supra note 85, at 1478 (UDODA provides clear distinction between life and death by excluding persistent vegetative state); text accompanying notes 100-106 infra (problems with failure to specify absence of brain stem function). In addition to the four states that have adopted the UDODA, supra note 84, two other states specifically include destruction of the brain stem in their determination of death statutes. See Nev. Rev. Stat. § 451.007 (1979); Wyo. Stat. § 35-19-101 (Supp. 1980); Jacobson, Anderson & Speigel, supra note 52, at 715 & n.62 (two state statutes include death of brain stem).

¹⁰⁰ See McCabe, supra note 85, at 1478 (requirement of brain stem destruction in UDODA avoids debate surrounding persistent vegetative state); Commissioners' Note, supra note 85 (UDODA requires cessation of brain stem to distinguish determination of death from persistent vegetative state).

¹⁰¹ See In re Quinlan, 70 N.J. 10, 355 A.2d 647, cert. denied, 429 U.S. 922 (1976). In Quinlan, the father of a comatose young woman sought appointment as guardian of his daughter, Karen Ann, requesting that the letters of guardianship contain the express power to authorize termination of extraordinary medical care. 70 N.J. at 18, 355 A.2d at 651. Physicians testified that Karen Ann was in a "chronic and persistent vegetative state" but that Karen Ann was not brain dead under the Harvard criteria. Id. at 24, 355 A.2d at 654; see Harvard Committee, supra note 8, at 337-38 (criteria for determining irreversible cessation of brain function); note 12 supra (Harvard criteria). According to the testifying physicians, Karen Ann's existent brain stem function was ineffective for spontaneous respiration and she could not survive without a respirator. 70 N.J. at 25, 355 A.2d at 655. Recognizing that a patient's right to privacy permits discontinuance of extraordinary treatment in the circumstances present in Quinlan, the New Jersey Supreme Court held that the patient's guardian was entitled to assert the patient's right to privacy. Id. at 38-42, 355 A.2d at

stem function in addition to cessation of all other brain functions thus avoids the possibility of a premature declaration of death.¹⁰²

Since the medical profession apparently accepts the total brain death requirement, physicians arguably will interpret the term "irreversible cessation of brain function" to include destruction of brain stem function. In view of current public concern with the "right to die" and similar issues, however, statutorily requiring absence of brain stem function emphasizes the totality of the brain death concept and clearly distinguishes between death and persistent vegetative state. One rationale for a uniform standard such as the UDODA is to permit the use of new diagnostic techniques to determine death while preserving the degree of certainty essential to resolution of legal issues. Failure to emphasize the totality of the brain death standard, however, injects ambiguity into the distinction between life and death. Accordingly, the brain death standard contained in the UDODA provides a clearer distinction between life and death by specifically excluding physical states in which any brain activity continues.

Although the statutory language of the UDODA fails to state expressly that the enumerated standards apply for all legal and medical

661-64. Although physicians withdrew the respirator from Karen Ann in May, 1976, she presently remains in a persistent vegetative state. See McCabe, supra note 85, at 1478.

¹⁰² See, e.g., McCabe, supra note 85, at 1478 (requiring irreversible destruction of entire brain makes clearest distinction currently possible between life and death); Victor, supra note 9, at 45 (entire brain used as basis of brain death "to err on side of conservatism"); Commissioners' Note, supra note 85 (persistent vegetative state not valid legal or medical basis for determining death); note 101 supra (patient with brain stem function exhibited spontaneous respiration after discontinuance of artificial support).

See, e.g., Harvard Committee, supra note 8, at 340 (irreversible coma includes loss of function at cerebral, brain stem, and often spinal level); Brain Death I, supra note 1, at 1651 (brain death is condition in which the brain is destroyed completely); Victor, supra note 9, at 41, 44 (brain death is state of complete destruction of all brain tissue, including brain stem).

¹⁰⁴ See McCabe, supra note 85, at 1478 (importance of distinguishing between persistent vegetative state and death); Commissioners' Note, supra note 85 (UDODA distinguishes death from persistent vegetative state and does not address issues such as death with dignity, living wills, or euthanasia).

¹⁰⁸ See Gregory, supra note 5, at 1-2 (UDODA response to problems generated by inadequacy of traditional standard in view of current medical capabilities); McCabe, supra note 85, at 1476, 1478 (adoption of UDODA represents recognition of evolution in medical technology); text accompanying notes 93-97 supra (purpose of UDODA to establish legal standard and permit advances in medical criteria).

¹⁰⁶ See McCabe, supra note 85, at 1478 (failure to distinguish between death and persistent vegetative state blurs distinction between life and death).

UNIFORM DETERMINATION OF DEATH ACT § 1; see McCabe, supra note 85, at 1478 (UDODA sharpens distinction between life and death by excluding persistent vegetative state); Commissioners' Note, supra note 85 (rejecting concepts of neocortical death and persistent vegetative state as valid bases for determining death). The only purpose of the UDODA is to establish a standard for determining the occurrence of death and not to address issues such as euthanasia or death with dignity. Commissioners' Note, supra note 85.

purposes, the Act clearly applies to all situations.¹⁰⁸ The UDODA provides simply that a patient who satisfies one of the statutory standards is dead.¹⁰⁹ The absence of any qualifying language in the provision, together with the UDODA's stated purpose of unifying state law on the subject of determining death,¹¹⁰ indicates that the Act applies in all contexts. Thus, the UDODA avoids criticisms that confront states with death standards limited to specific purposes.¹¹¹ By establishing general standards appropriate for all legal and medical purposes, the UDODA prevents the anomaly of considering a patient alive or dead depending on the issue involved.

In contrast to several state determination of death statutes that require independent verification of death by two physicians, 112 the UDODA does not indicate the number of physicians required to make a determination of death. 113 The statutory requirement that more than one physician independently determine the occurrence of death in each case arguably prevents abuse by guarding against improper declarations of death. 114 In addition, a confirmatory diagnosis of death may alleviate a physician's fears of potential criminal or civil liability for terminating artificial support devices. 115 The UDODA's failure to require determina-

¹⁰⁸ See Uniform Determination of Death Act § 1; Commissioners' Note, supra note 85. Noting that the UDODA should apply to all situations, the NCCUSL stressed that state legislatures should not incorporate the UDODA into the Uniform Anatomical Gift Act, thereby limiting the UDODA to organ donors. Commissioners' Note, supra note 85.

¹⁰⁹ Uniform Determination of Death Act § 1.

¹¹⁰ UNIFORM DETERMINATION OF DEATH ACT § 2.

¹¹¹ See Capron & Kass, supra note 7, at 106-07 (existence of multiple standard for different purposes risks confusion and abuse). See generally Jacobson, Anderson & Speigel, supra note 52 (discussing Illinois statute that recognizes brain death only for purposes of UAGA).

¹¹² See, e.g., Ala. Code § 22-31-1 & -3 (Supp. 1981) (independent confirmation by second physician required when patient prospective organ donor or when brain death standard applied); Cal. Health & Safety Code § 7180 (West Supp. 1981) (independent confirmation by another physician); Conn. Gen. Stat. Ann. § 19-139i(b) (West Supp. 1981) (two physicians determine time of death); Fla. Stat. Ann. § 382.05 (Supp. 1981) (two physicians make determination of death); Ga. Code Ann. § 88-1715.1 (1979) (independent confirmation of death by another physician); Hawah Rev. Stat. § 327-C-1 (Supp. 1979) (determination of death based on brain death standard requires opinions of attending physician and consulting physician); Iowa Code § 702.8 (1979) (two physicians required to determine death based on brain death standard); La. Rev. Stat. Ann. § 9:111 (West Supp. 1981) (two physicians required to pronounce death of prospective organ donor); Va. Code § 54-325.7 (Supp. 1981) (verification of neurologist required when determination of death based on brain death standard).

¹¹³ See Uniform Determination of Death Act § 1.

See, e.g., Kennedy, supra note 62, at 918-19 (criticizing failure of Kansas determination of death statute to require examination by two physicians before pronouncing death); Selby & Selby, supra note 3, at 536 (noting that major criticism of Kansas statute lack of requirement that two physicians pronounce death); cf. Jacobson, Anderson & Speigel, supra note 52, at 713-16 (diagnosis of death by two physicians preferable but not essential).

¹¹⁵ See Jacobson, Anderson & Speigel, supra note 52, at 714 (confirmatory opinion of death may alleviate physicians' fears of liability for discontinuing artificial support).

tion of death by a specific number of physicians is immaterial, however. 116 Determinations of death based on accepted standards of medical practice permit the medical profession to decide whether prevailing medical technology reasonably requires confirmatory determinations of death. 117 The requirement in the UDODA that physicians perform according to ordinary medical practice imposes on the medical profession an objective standard for determining death that arguably deters abuse and eliminates the need for verification of death by another physician. 118

An additional potential criticism of the UDODA is the Act's failure to address specifically the civil and criminal liability of physicians who make determinations of death according to the provisions of the Act. A number of state statutes expressly exempt from criminal or civil liability a person who acts in good faith pursuant to the terms of the particular determination of death statute. Since determination of death statutes authorize physicians to act according to the statutory standards, a provision exempting a person who complies with the statute from civil and criminal liability appears unnecessary. Thus, the absence of statutory language addressing liability of persons who make determinations of death does not diminish the effectiveness of the UDODA.

Of all determination of death standards that currently exist, the UDODA is best designed to achieve the purposes of a determination of death statute. The consensus of the ABA, AMA, and NCCUSL in drafting the UDODA demonstrates the belief of the medical and legal professions that the UDODA provides effective standards for determining death.¹²¹ The effectiveness of the UDODA, however, is limited until all

¹¹⁶ See Capron & Kass, supra note 7, at 116 (diagnosis by two physicians might be appropriate in transplantation situation, but general determination of death standard should not require safeguard of second diagnosis).

¹¹⁷ See Uniform Determination of Death Act § 1; Capron & Kass, supra note 7, at 116-17 (requisite number of physicians for determining brain death part of ordinary medical standards); Commissioners' Note, supra note 85 (medical profession formulates appropriate procedures for determination of death).

¹¹⁸ See Capron & Kass, supra note 7, at 116-17 (ordinary standards of medical practice govern application of brain death procedures); Jacobson, Anderson & Speigel, supra note 52, at 713-14 (requirement of two physicians incorrectly suggests that determination of brain death subjective or difficult or that some doctors not reliable to make accurate diagnosis).

¹¹⁹ See Ala. Code § 22-31-4 (Supp. 1981); Fla. Stat. Ann. § 382.085(4) (Supp. 1981); Ga. Code Ann. § 88-1715.1(b) (1979); Tex. Rev. Civ. Stat. Ann. art. 4447t, § 2 (Vernon Supp. 1980); W. Va. Code § 16-19-1(c) (Supp. 1980).

¹²⁰ See Legislation & Death, supra note 15, at 182 & n.40 (physician loses protection from liability only if he or she acts outside bounds of statute or fails to exercise due care); Commissioners' Note, supra note 85 (since no authorized person who acts in good faith in reliance on UDODA is criminally or civilly liable for his or her acts, no need to address liability in text of act).

¹²¹ See McCabe, supra note 85, at 1476 (UDODA represents agreement of medical and legal profession on model determination of death act); Commissioners' Note, supra note 85 (UDODA result of agreement on common language between representatives of legal and medical professions).

states legislatively enact the UDODA. Although four states have adopted the UDODA since the NCCUSL approved the Act in August 1980,¹²² only two state legislatures have codified the UDODA.¹²³ In the two states that judicially have adopted the UDODA, legislative adoption of the Act is essential since the standards of the UDODA arguably apply only in the context addressed in the particular cases.¹²⁴ Legislative adoption of the UDODA by all states will establish legal and medical certainty concerning determinations of death.¹²⁵ Furthermore, adoption of the UDODA will ensure uniform treatment of persons in the same physical condition.¹²⁶ Consequently, all state legislatures should enact the UDODA without delay.

PAMELA L. RYAN

¹²² See Swafford v. State, _____ Ind. _____, 421 N.E.2d 596, 602 (1981); In re Bowman, 94 Wash. 2d 407, 421, 617 P.2d 731, 738 (1980); IDAHO CODE § 54-1819 (Supp. 1981); MISS. CODE ANN. § 41-36-3 (Supp. 1981).

¹²³ See Idaho Code § 54-1819 (Supp. 1981); Miss. Code Ann. § 41-36-3 (Supp. 1981). In Idaho, a previous statute provided that physicians apply a brain death standard, although the statute did not preclude application of other customary or usual procedures. See Idaho Code § 54-1819 (1979) (repealed 1981). Thus the Idaho legislature's adoption of the UDODA and consequent repeal of the original brain death statute apparently indicates the legislature's recognition that the UDODA provides a determination of death approach preferable to a brain death model. Compare Idaho Code § 54-1819 (1979) (repealed 1981) (nonpreclusive brain death standard) with Idaho Code § 15-1819 (Supp. 1981) (UDODA).

¹²⁴ See Swafford v. State, _____ Ind. ____, 421 N.E. 2d 596, 602 (1981) (adopting UDODA for purposes of homicide cases); In re Bowman, 94 Wash. 2d 407, 421, 617 P.2d 731, 738 (1980) (adopting UDODA in authorizing withdrawal of life support devices from child abuse victim medically determined brain death); text accompanying notes 50-56 supra (problems with judicially adopted determination of death standards).

¹²⁵ See McCabe, supra note 85, at 1478 (UDODA clarifies determination of death and should achieve uniformity between states without delay); text accompanying notes 16-44 supra (issues that particularly require uniform statute for determining death).

¹²⁶ See McCabe, supra note 85, at 1478 (unconscionable for different jurisdictions to treat matters of life and death differently).