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Attorneys for Defendant
UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF ALAMEDA - NORTHERN DIVISION

LATASHA NAILAH SPEARS WINKFIELD; MARVIN WINKFIELD; SANDRA CHATMAN and JAHI McMATH, a minor, by and through her Guardian Ad Litem, LATASHA NAILAH SPEARS WINKFIELD,

Plaintiff,

vs.

FREDERICK S. ROSEN, M.D.; UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND (formerly Children's Hospital & Research Center at Oakland); MILTON McMATH, a nominal defendant, and DOES 1 THROUGH 100,

Defendants.

Case No. RG15760730

NOTICE OF DEMURRER, MOTION TO STRIKE REQUEST FOR JUDICIAL NOTICE; UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND'S DEMURRER TO FIRST CAUSE OF ACTION AND MOTION TO STRIKE PORTION OF FIRST AMENDED COMPLAINT

Date: January 8, 2016
Time: 2:00 p.m.
Dept: 20
Complaint Filed:
Trial: N/A

Reservation No. R-1686975

TO PLAINTIFFS AND THEIR ATTORNEYS OF RECORD:

PLEASE TAKE NOTICE that on the 8th day of January, 2016 at 2:00 p.m. in Department 20 of the above entitled court, defendant UCSF Benioff Children's Hospital Oakland will demur to the first cause of action of plaintiffs' First Amended Complaint pursuant to C.C.P. § 430.10 (e) for failure to state facts sufficient to constitute a cause

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of action, and will move to strike improper portions of said Complaint pursuant to C.C.P. § 435-§ 436 as set forth below.

DEMURRER

First Cause of Action

1. The first cause of action fails to state facts sufficient to constitute a cause of action for Personal Injury on behalf of Jahi McMath in Jahi has been declared dead under California law, and she has no standing to sue for personal injury. C.C.P. § 430.10 (e)

MOTION TO STRIKE

Conditional Language – Wrongful Death Action

1. *"In the event that it is determined that"* [Jahi succumbed to the injuries causes by the negligence of the defendants]. First Amended Complaint for Damages at 13:27-28.

This demurrer and motion will be based on this Notice/ Demurrer/ Motion to Strike, the accompanying Memorandum of Points and Authorities and Request for Judicial Notice therein, Exhibits A-G, the Declaration of Joseph E. Finkel, all pleadings and papers on file herein as well argument and authority that may be presented in Reply or at the time of the hearing of this matter.

Dated: November 23, 2015

GALLOWAY, LUCCHESE, EVERSON & PICCHI

By: _____ KAS
KAREN A. SPARKS, ESQ. #167397
Attorneys for Defendant
UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND

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PROOF OF SERVICE

I declare under penalty of perjury that:

I am a citizen of the United States and am employed in the County of Contra Costa. I am over the age of eighteen years and not a party to the within action. My business address is 2300 Contra Costa Boulevard, Suite 350, Pleasant Hill, CA 94523-2398.

On the date set forth below, I caused the attached NOTICE OF DEMURRER, MOTION TO STRIKE REQUEST FOR JUDICIAL NOTICE; UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND'S DEMURRER TO FIRST CAUSE OF ACTION AND MOTION TO STRIKE PORTION OF FIRST AMENDED COMPLAINT to be served on the parties to this action as follows:

I retained **UNITED PARCEL SERVICE** to serve by overnight delivery a true copy thereof on the parties as set forth on the attached service list. C.C.P. §§1013(c), 2015.5.

Executed on November 23, 2015 at Pleasant Hill, California.

Debbie Miller

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MCMATH (WINKFIELD) V. CHILDREN'S HOSPITAL

ALAMEDA - NORTHERN DIVISION COUNTY SUPERIOR COURT CASE NO. RG15760730

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IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF ALAMEDA - NORTHERN DIVISION

LATASHA NAILAH SPEARS WINKFIELD; MARVIN WINKFIELD; SANDRA CHATMAN and JAHI McMATH, a minor, by and through her Guardian Ad Litem, LATASHA NAILAH SPEARS WINKFIELD,

Plaintiffs,

vs.

FREDERICK S. ROSEN, M.D.; UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND (formerly Children's Hospital & Research Center at Oakland); MILTON McMATH, a nominal defendant, and DOES 1 THROUGH 100,

Defendants.

Case No. RG15760730

The Honorable Robert B. Freedman

MEMORANDUM OF POINTS AND AUTHORITIES IN SUPPORT OF UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND'S DEMURRER TO FIRST CAUSE OF ACTION AND MOTION TO STRIKE PORTIONS OF FIRST AMENDED COMPLAINT; REQUEST FOR JUDICIAL NOTICE

Date: January 8, 2016
Time: 2:00 p.m.
Dept: 20
Complaint Filed:
Trial: N/A

Reservation No. R-1686975

MEMORANDUM OF POINTS AND AUTHORITIES IN SUPPORT OF UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND'S DEMURRER TO FIRST CAUSE OF ACTION AND MOTION TO STRIKE PORTIONS OF FIRST AMENDED COMPLAINT; REQUEST FOR JUDICIAL NOTICE

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I.

INTRODUCTION

This is a medical malpractice/wrongful death action arising out of the surgical and post-operative care provided to Jahi McMath at Children's Hospital Oakland in December, 2013. Following defendants' demurrer to the original complaint, the First Amended Complaint was filed. The amended Complaint again alleges causes of action for personal injury, negligent infliction of emotional distress, and wrongful death.

In December, 2013, this Court found Jahi to be irreversibly brain dead, and legally dead under California law. The determination of death was final, re-litigation of this issue is barred by the rules of collateral estoppel, and the amended allegations of do not fall within the "changed circumstances" exception to those rules. The Hospital therefore demurs again to the first cause of action because Jahi does not have standing to assert a cause of action for personal injury, and also moves to strike the portion of the wrongful death cause of action contemplating the re-litigation of the death issue in this action.

II.

APPLICABLE LAW

C.C.P. § 430.10 sets forth the grounds for demurrer:

> The party against whom a complaint ... has been filed may object, by demurrer ... to the pleading on any ... of the following grounds...
>
> (e) The pleading does not state facts sufficient to constitute a cause of action.
>
> (f) The pleading is uncertain. As used in this subdivision, "uncertain" includes ambiguous and unintelligible.

C.C.P. § 435 provides for motions to strike and reads in part as follows:

> (b) (1) Any party, within the time allowed to respond to a pleading may serve and file a notice of motion to strike the whole or any part thereof....

C.C.P. § 436 permits the court in its discretion to strike various improper matters:

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> The court may, upon a motion made pursuant to Section 435...
>
> (a) Strike out any irrelevant, false, or improper matter inserted in any pleading.
>
> (b) Strike out all or any part of any pleading not drawn or filed in conformity with the laws of this state, a court rule, or an order of the court.

The grounds for demurrers and motions to strike must be apparent from the face of the complaint or from matters subject to judicial notice. C.C.P. § 430.30 and § 437.

III.

REQUEST FOR JUDICIAL NOTICE

The Hospital respectfully asks the Court to take judicial notice of:

1) The following records of this Court in *Winkfield v. Children's Hospital Oakland* Case No. RP13707598:
   a. 1/2/2014 Amended Order (1) Denying Petition For Medical Treatment and (2) Granting In Part Application To Seal Portions Of Record [non-substantive amendments to 12/26/2013 Order], Exhibit A.
   b. 1/17/2014 Final Judgment Denying Petition for Medical Treatment, Exhibit B.
   c. 10/3/2014 Writ of Error Corum Nobis And Memorandum Regarding Court's Jurisdiction To Hear Petition for Determination That Jahi McMath Is Not Brain Dead, with accompanying Expert Declarations, Exhibit C 1-6.
   d. 10/6/2014 Order Appointing Dr. Paul Fisher As Court Expert Witness Exhibit D.
   e. 10/6/14 Letter Of Paul Fisher, M.D., with attached American Academy of Pediatrics' Guidelines for the Determination of Brain Death in Infants and Children, Exhibit E.
   f. 10/8/2014 Case Management Order Confirming Petitioner's Withdrawal Of Petition for Writ Of Error Coram Nobis, Exhibit F.
2) The Certificate of Death for Jahi McMath, Exhibit G.

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Evidence Code § 452 (d) permits the Court to take judicial notice of the records of any court of this state. Evidence Code § 452 (c) permits the Court to take judicial notice of official acts of the legislative, executive and judicial departments of the state, including the filing of death certificates. People v. Terry (1974) 38 Cal. App. 3d 432, 439.

Evidence Code § 453 makes judicial notice of these matters mandatory when the adverse party has been given sufficient notice of the request. Notice is sufficient if given in the demurrer or motion to strike or in the supporting points and authorities. C.C.P. § 430.70 and § 437.

See accompanying Declaration of Joseph E. Finkel In Support of UCSF Benioff Children's Hospital Oakland's Request For Judicial Notice.

IV.

JAHI HAS BEEN DECLARED LEGALLY DEAD UNDER CALIFORNIA LAW

A. THE DETERMINATION OF DEATH IS APPARENT FROM THE COMPLAINT ITSELF

According to the Complaint, Jahi underwent extensive surgery on December 9, 2013. FAC ¶ 11. The defendants allegedly failed to appropriately respond to extensive post-operative bleeding. The next day a Code Blue was called and continued for 2 hours 33 minutes, during which time defendants allegedly failed to establish an airway, and this allegedly resulted in inadequate oxygenation. FAC ¶¶ 18-19. On December 13, 2013, plaintiffs were advised that EEG testing showed that Jahi had sustained significant brain damage, that repeat testing the next day revealed severe brain damage, that Jahi had been put on an organ donor list, and that life support would be withdrawn. FAC ¶ 23. Plaintiffs also allege that the Chief of Pediatrics told them that Jahi was dead. FAC ¶ 24.

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B. THE DETERMINATION OF JAHI'S DEATH WAS FULLY LITIGATED, AND THE FINAL JUDGMENT IN THIS MATTER WAS ISSUED BY THIS COURT IN JANUARY 2014

In December, 2013, plaintiffs petitioned this Court seeking an injunction to prevent the Hospital from withdrawing Jahi from life support. The Hospital opposed the Petition arguing the Hospital had no duty to continue any medical interventions because there had been an irreversible cessation of all brain functions, and thus Jahi was dead as a matter of law under Health and Safety Code § 7180. 1/2/2014 Amended Order Denying the Petition For Medical Treatment at 2:7-21, Exhibit A.

The Court considered Declarations and/or testimony from Dr. Robert Heidersbach and Dr. Robin Shanahan, the physicians at CHO who made the initial diagnosis of irreversible brain death. 1/2/2014 Amended Order Denying the Petition For Medical Treatment at 2:21-3:2, Exhibit A. The Court appointed Dr. Paul Fisher, Chief of Child Neurology at Stanford University School of Medicine, to serve as an independent physician. Dr. Fisher also examined Jahi and testified as to his findings. Id. at 5:14-6:5. The American Academy of Pediatrics' Guidelines for the Determination of Brain Death in Infants and Children setting forth the accepted standards for determining brain death in children were admitted, as well as the examination notes of Dr. Shanahan and Dr. Fisher. Id. at 6:4-17. Dr. Shanahan and Dr. Fisher both testified that Jahi was brain dead under the accepted medical standards. Id. at 7:1-2 and 7:21-22. *Counsel for Petitioner stipulated that Dr. Fisher had conducted his examination and made the brain death diagnosis according to accepted standards.* Id. at 6:22-7:1.

The Court specifically stated that in order to decide the issue presented by the Petition, it *necessarily had to determine whether Jahi was legally dead.* 1/2/2014 Amended Order Denying the Petition For Medical Treatment 3:24-25, Exhibit A. The Court found by clear and convincing evidence that Jahi was legally dead according to accepted medical standards and denied the plaintiffs' Petition for Medical Treatment. Id.

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at 16:9-22. A Final Judgment on the merits was entered. 1/17/2014 Final Judgment Denying Petition for Medical Treatment, Exhibit B.

The Hospital again asks the Court to take judicial notice of the 1/2/2014 Amended Order Denying the Petition For Medical Treatment at 2:7-21, Exhibit A and the 1/17/2014 Final Judgment Denying Petition for Medical Treatment, Exhibit B, as well as judicial notice of the fact that the issue of whether Jahi is legally dead has been fully litigated, necessarily decided, and finally determined in a prior action between the same parties. Request for Judicial Notice and Declaration of Joseph E. Finkel.

C. A DEATH CERTIFICATE WAS ISSUED

A Death Certificate was also issued, and the Hospital again asks the Court to take judicial notice of the Certificate. Certificate of Death, Exhibit G. At the very least, issuance of a Death Certificate permits the Court to take judicial notice of the fact that a determination of death was made, that it was considered final, and that in California, Jahi is legally dead.

V.

A DETERMINATION OF DEATH IS INTENDED TO BE FINAL AND MUST BE FINAL TO SERVE ITS INTENDED PURPOSE

Health and Safety Code § 7180 governs the determination of death in California and reads as follows:

> (a) An individual who has sustained either (1) *irreversible* cessation of circulatory and respiratory functions, or (2) *irreversible* cessation of all functions of the entire brain, including the brain stem, is dead. A determination of death must be made in accordance with accepted medical standards. [Emphasis added]
>
> (b) This article shall be applied and construed to effectuate its general purpose to make uniform the law with respect to the subject of this article among states enacting it.
>
> (c) This article may be cited as the Uniform Determination of Death Act.

Health and Safety Code § 7180 adopts the Uniform Determination of Death Act without change. Statutes are to be construed in a manner consistent with the ordinary meaning

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of the words used, and in a manner that gives effect to their intended purpose. See e.g. Estate of Griswolds v. See (2004) 25 Cal. 4th 904, 910-911.

Consistent with its ordinary meaning, death is irreversible and final. And to serve its intended purpose, a determination of death must be final. The determination of death permits medical treatment to be withdrawn (see 1/17/2014 Final Judgment Denying Petition for Medical Treatment, Exhibit B), and organs to be removed for transplant (see Health and Safety Code § 7151.40). A declaration of death also permits wills to be probated, insurance proceeds to be distributed, and it permits families to move on. The determination must therefore be final. It is unclear what, if any, meaning or use a reversible declaration of death would have, and in fact the Uniform Determination of Death Act, expressly requires the *irreversible* cessation of all brain functions.

The Uniform Determination of Death Act not only requires a determination that the cessation of all brain function be irreversible, it explicitly or implicitly recognizes and depends on the fact that "...the medical profession has developed techniques for determining if loss of brain function while cardiorespiratory support is administered. Those are the techniques are to be set out in the accepted medical standards for determining irreversible brain death. See UDDA, and National Conference of Commissioners on Uniform State Laws, Prefatory Note ¶ 2, 12A U.L A. (Masters Ed. 2008), Determination of Death Act pp.778, Exhibit H.

VI.

THE DETERMINATION OF JAHI'S DEATH IS NOW FINAL, NOTHING IN THE FIRST AMENDED COMPLAINT REQUIRES OR PERMITS PLAINTIFFS TO RE-LITIGATE THIS ISSUE

A. WHEN FACTS OR STATUS ARE FIXED AND PERMANENT IN NATURE, THE "CHANGED CIRCUMSTANCES" EXCEPTION TO COLLATERAL ESTOPPEL DOES NOT APPLY

The principles of *res judicata*, and more specifically collateral estoppel, bar the re-litigation of an issue decided in a prior proceeding if: 1) the issue was actually

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litigated and necessarily decided in the prior proceeding; 2) the issue previously decided is identical to the one to be re-litigated in the present proceeding; 3) the party against whom collateral estoppel is asserted was a party, or in privity to a party, in the prior proceeding, and 4) the previous proceeding resulted in a final judgment on the merits. See e.g. Daar & Newman v. VRL Intern (2005) 129 Cal. App. 4th 482, 489. All these requirements have been met. Part IV B above.

Plaintiffs, however, contend that the principles of collateral estoppel do not bar the re-litigation of the death issue because there are subsequent events that bring this case within the changed circumstance exception to collateral estoppel. In opposition to the Hospital's previous Demurrer, plaintiffs cited to the following explanation of this exception:

> It is clear that if facts and circumstances change after the first case is final, they are no longer "identical" by the time the second case rolls along. "[T]he estoppel effect of a judgment extends only to the facts in issue as they existed at the time the prior judgment was rendered." (citation omitted.) "Some issues are not static, that is, they are not fixed and permanent in their nature. When a fact, condition, status, right, or title is not fixed and permanent in nature, then an adjudication is conclusive as to the issue at the time of its rendition, but is not conclusive as to that issue at some later time." (Ibid., citing Lunt v. Boris (1948) 87 Cal.App.2d 694, 695 [197 P.2d 568].)

Union Pacific Railroad Company v. Santa Fe Pacific Pipelines, Inc. (2014) 231 Cal.App.4th 134, 181. Thus the exception applies *only* when the fact or status at issue is *not* fixed and permanent in nature, and the defense has found no authority, applying the exception to a determination of death.

Changed circumstances in some cases may permit the re-litigation of an issue, but this is not true when the issue is irreversible brain death.[1]

---

[1] The Court previously asked what would happen if Jahi were to walk into Court and speak. But the UDDA (Health and Safety Code § 7180) and the accepted standards for determining irreversible brain death apply in those instances when respiration and circulation are maintained artificially, and neurological testing is required to determine if the brain has irreversibly ceased to function. It is the neurological determination of brain death that is at issue here and in the prior proceedings. If Jahi were to walk into Court, there would be no need for Neurology experts and Neurological testing. *These* new facts would not only fall outside the scope of the prior proceedings, they would fall outside the scope of the UDDA.

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B. *IRREVERSIBLE* BRAIN DEATH DETERMINED ACCORDING TO ACCEPTED MEDICAL STANDARDS IS, BY DEFINITION, FINAL, FIXED AND PERMANENT

The question of whether Jahi no longer meets the criteria for brain death was already fully and finally determined in December, 2013, when Dr. Fisher and two other physicians found that Jahi had suffered *irreversible* brain death. This was a final, fixed, and permanent determination as a matter of accepted medical fact and as a matter of law.

When someone is found to be irreversibly brain dead, by definition, it means that the medical knowledge and clinical experience upon which the accepted medical standards for determining the irreversible brain death depend have determined that there is *no medical possibility* of change. When the determination of *irreversible* brain death was made, the possibility of a future change in status was ruled out *at that time.*

The question of whether Jahi no longer meets the criteria for brain death has already been answered in December 2013, and the answer is No. The October 2014, proceedings and the Complaint in the present case are simply continuing expert disputes over an issue that has already been decided.

C. PLAINTIFFS ARE IMPROPERLY ASKING THIS COURT OR A JURY IN THIS CASE TO REJECT THE ACCEPTED MEDICAL STANDARDS USED TO DETERMINE IRREVERSIBLE BRAIN DEATH

During the December 2013 proceeding before Judge Grillo, plaintiffs acknowledged that the American Academy of Pediatrics' Guidelines set out the accepted medical standard for determining irreversible brain death and stipulated that Dr. Fisher had appropriately conducted the brain death examination according to the accepted medical standards, even though they disagreed with his conclusion that Jahi was irreversibly brain dead. See 1/2/2014 Amended Order Denying the Petition For Medical Treatment at 6:22-7:1, Exhibit A.

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If plaintiffs were contending that Dr. Fisher in some way erred back in December, 2013, further litigation on that issue would clearly be barred by the rules of collateral estoppel because Jahi's condition in December, 2013 was fully litigated and finally determined.

Although not entirely clear, based the plaintiffs' October 2014 attempt to have declared "not brain dead," they appear be contending that they have new evidence establishing that Jahi no longer meets the criteria for brain death, that the accepted medical standards applied in December, 2013 were incapable of determining if the irreversible cessation of all brain functions has occurred, and that she was not really brain dead at that time.

In October, 2014, nine months after Jahi was determined to be legally dead under California law, plaintiffs filed a Writ of Error Corum Nobis And Memorandum Regarding Court's Jurisdiction To Hear Petition for Determination That Jahi McMath Is Not Brain Dead on the grounds they had irrefutable evidence that Jahi no longer meets the accepted criteria for brain death, the same thing they are alleging in this case. Plaintiffs' papers included the Declarations from plaintiffs' experts. Writ of Error Corum Nobis And Memorandum Regarding Court's Jurisdiction To Hear Petition for Determination That Jahi McMath Is Not Brain Dead; Declarations of Philip De Fina, Ph.D., Calixto Machado M.D., Charles J. Prestigiacoma M.D., Elena B. Labkovsky Ph.D., and Alan Shewmon M.D. Exhibit C 1-6.

One of those experts, Dr. Alan Shewmon, explains that even though Jahi is clearly not brain dead now, he has no doubt that at the time of the original diagnosis, she fulfilled the diagnostic criteria for brain death that had been correctly and rigorously applied in December, 2013. He then goes on to state:

> A likely explanation for the discrepancy (in fact the only explanation I can think of) is that (1) *the standard clinical diagnostic criteria are not as absolutely, 100% reliable as commonly believed,* and (2) the radionuclide blood flow studies are not sensitive enough to distinguish no flow from low flow.... [Emphasis added]

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Declaration of Alan Shewmon M.D. at page 3 ¶ 4, Exhibit C 6. Dr. De Fina expresses a similar view, stating in part:

> I personally have seen only one other case such as Jahi McMath's wherein a person pronounced brain dead, and confirmed by more than five (5) United States Doctors was, *with more sensitive testing, of the type performed on Jahi McMath,* found at a date remote from the insult to the brain, determined to have brain activity.... [Emphasis added

Declaration of Phillip De Fina Ph.D., Exhibit C 2. Plaintiffs are disputing the validity and/or reliability of the American Academy of Pediatrics' Guidelines for Determining Irreversible Brain Death In Children and Infants, even though plaintiffs acknowledge they are *the accepted* standards for determining brain death in children.

The American Academy of Pediatrics' Guidelines were developed by a task force that included the Society of Critical Care Medicine (section on Critical Care and section on Neurology), the American Academy of Pediatrics, and the Child Neurology Society, and are broadly accepted by the medical community as the standard for determining irreversible brain death in children. 10/6/2014 Letter of Paul Fisher M.D., Exhibit D at 1¶3, 4, and 16-18.

It is not within the province of courts and juries to reject the American Academy of Pediatrics Guidelines, nor is it up to the courts to determine what the accepted medical standards *should* be, or to otherwise second guess the Academy and the members of the medical community that developed and accepted its Guidelines.

If plaintiffs believe they have evidence showing that the accepted Guidelines are incapable of determining if irreversible cessation of all brain function has occurred, they must address their concerns to the American Academy of Pediatrics, to those who developed and the Guidelines, and to the broader medical community that accepted the Guidelines. If plaintiffs' experts and the research foundation (IFBR) with which they are associated have been unable to convince the medical community to accept their position on the determination of brain death in children, it is not up to courts or juries to decide the issue on a case by case basis.

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D. THE UDDA MAKES IRREVERSIBLE BRAIN DEATH A BASIS FOR DETERMINING DEATH AS A MATTER OF LAW, AND THE LAW IS NOT SUBJECT TO CHANGE BY THE COURTS

If plaintiffs are contending that brain death is inherently reversible, or that it is not possible to determine when irreversible cessation of brain function has occurred, or they otherwise intend to challenge "irreversible brain death" as a valid basis for determining death, they would in effect be improperly asking the Court to reject the basic provisions of the Uniform Determination of Death Act (UDDA).

The Uniform Determination of Death Act was drafted by both legal and medical authorities, it reflects accepted biomedical practice, it has the approval of both the ABA and AMA, and it has been adopted by over 30 jurisdictions. National Conference of Commissioners on Uniform State Law, 12A U.L.A. (Masters Ed., 2008) Determination of Death Act pp. 777-779, Exhibit H.

The UDDA establishes irreversible loss of brain function as a means of determining death, and is premised on the irreversible nature of the loss, and the ability of accepted medical standards to determine whether irreversible cessation of brain function has occurred. It is not up to this Court or a jury in this case to reweigh the facts and findings underlying the Uniform Determination of Death Act or to decide whether brain death can or should be used as a basis for determining death. See Schabarum v. California Legislature (1998) 60 Cal.App.4th 1205, 1219; C.C.P. §1858.

Any concerns the IFBR and the plaintiffs may have about the efficacy of brain death as a basis for determining death should be addressed to those who drafted the law and the legislatures that enacted it, not to the Court or the jury in this case.

VII.

THE DEATH CERTIFICATE ALLEGATIONS IN THE AMENDED COMPLAINT SIMPLY AFFIRM THE FINAL JUDGEMENT ISSUED BY JUDGE GRILLO

Again, the Hospital asks the Court to take judicial notice of the issuance of a Death Certificate, and therefore of the fact that a determination of death was made, that

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it was considered final, and that in California Jahi is legally dead. Certificate of Death, Exhibit G, Request for Judicial Notice.

The issuance of the Death Certificate affirmed the finding of death, and is not itself a subsequent event that would justify re-litigating the death issue. Even assuming arguendo that the voiding or amending of the Death Certificate would bring this matter within the scope the "changed circumstances" exception to the rules of collateral estoppel, it appears from the complaint that this did not happen. In ¶¶ 27- 30 of the first amended complaint, plaintiffs allege that they petitioned the State of California to void or amend the Death Certificate. They were informed the State had no standing to take such an action, and were directed to the Coroner who issued the Certificate. They allege that in June, 2015, they petitioned Dr. Muntu Davis, the Health Office for Alameda County Care Serve Agency as well as the Alameda County Registrar of Births and Deaths, with requests to void the Certificate, and that Dr. Davis did not respond. Plaintiffs do not allege what if any response they received from the County Coroner or the County Registrar. FAC ¶¶ 27-30. Plaintiffs allege that there are a number of deficiencies in the Death Certificate, but they were apparently not sufficient to warrant voiding or amending the Certificate.

Despite plaintiffs' efforts, the Death Certificate still remains in effect almost two years after it was issued.

VIII.

THE FIRST CAUSE OF ACTION FAILS TO STATE FACTS SUFFICIENT TO ESTABLISH THAT JAHI HAS STANDING TO SUE

The first cause of action is titled "For Personal Injuries On Behalf Of Jahi McMath." Complaint for Damages at 9:18-20. Jahi is legally dead under California law, and personal injury causes of action belonging to a decedent at the time of death can only be maintained by the decedent's personal representative, or if none, a successor in interest. C.C.P. § 377.30.

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As the decedent, Jahi McMath cannot maintain a cause of action to recover for her injuries, and the first cause of action therefore fails to state facts sufficient to constitute a cause of action. *California Practice Guide, Civil Procedure Before Trial* ¶ 2.77 (complaint filed by person without standing to sue subject to general demurrer).

IX.

THE HOSPITAL MOVES TO STRIKE THAT PORTION OF THE WRONGFUL DEATH CAUSE OF ACTION CONDITIONING IT ON A RE-DETERMINATION OF DEATH

Courts have recognized the importance of striking substantively defective portions of a complaint:

> ...[I]n some cases a portion of a cause of action will be substantively defective on the face of the complaint. Although a defendant may not demur to that portion, in such cases, the defendant should not have to suffer discovery and navigate the often dense thicket of proceedings in summary adjudication. ... [W]hen a substantive defect is clear from the face of a complaint ... a defendant may attack that portion of the cause of action by filing a motion to strike (citations omitted)....

PH II, Inc. v. Superior Court (1995) 33 Cal.App.4th 1680, 1682. The Hospital moves to strike those portions of the Complaint that are inconsistent with the determination that Jahi is legally dead.

The wrongful death cause of action begins with the conditional phrase *"In the event that it is determined that* Jahi succumbed to the injuries caused by the negligence of the defendants." FAC 13:27. The conditional phrase improperly contemplates a subsequent re-determination of death in this action, and it should be stricken.

X.

PLAINTIFFS HAVE TWICE FAILED TO HAVE THIS COURT DETERMINE THAT JAHI IS NOT DEAD, AND ARE NOW IMPROPERLY SEEKING A MORE FAVORABLE FORUM IN WHICH TO RE-LITIGATE THIS ISSUE

In their amended complaint plaintiffs allege four events that occurred after the Final Judgment was entered in January 2014 which they believe are irrefutable evidence that Jahi is no longer brain dead. They allege that a September 26, 2014 MRI

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shows vast areas of "structurally and relatively preserved brain" that are inconsistent with brain death. FAC ¶ 31. They allege a September 26, 2014 MRA/MA angiogram demonstrates intracranial blood flow. FAC ¶ 32. In addition, plaintiffs allege the onset of menarche in August 2014 which they allege is evidence of hypothalamic activity. FAC ¶¶ 33-34. Finally, they allege there is evidence of intentional responses to verbal commands and stimuli. FAC ¶ 35.

All four of the allegedly new facts and contentions in the amended complaint were before Judge Grillo in October of 2014. Writ of Error Corum Nobis And Memorandum Regarding Court's Jurisdiction To Hear Petition for Determination That Jahi McMath Is Not Brain Dead, Exhibit C1; Declaration of Philip De Fina, Ph.D., at ¶¶ 20-22, 27-28, 29, 30, Exhibit C2. Declaration of Calixto Machado M.D ¶¶ 14, 15, 18, Exhibit C3; Declaration of Charles J. Prestigiacoma M.D. ¶¶ 7, 8, Exhibit 4, Elena B. Labkovsky Ph.D. ¶¶ 13-14, Exhibit C5, and Declaration of Alan Shewmon M.D. at 2-3, Exhibit C6.

In October, 2014, Judge Grillo again appointed Dr. Paul Fisher as the Court's expert, despite the objections of plaintiffs. 10/6/2014 Order Appointing Dr. Paul Fisher As Court Expert Witness, Exhibit D. Dr. Fisher submitted a letter to the Court responding to the issues raised by plaintiff's experts and disputing their findings and conclusions. 10/6/2014 Letter Of Paul Fisher, M.D., Exhibit E. Plaintiffs first moved to continue the hearing on the Petition, but then dropped the matter altogether. 10/8/2014 Case Management Order Confirming Petitioner's Withdrawal Of Petition for Writ Of Error Coram Nobis at 3:3-10, 4:21-22, Exhibit F. They elected instead to continue this litigation in their medical malpractice action.

When plaintiffs dropped their Petition in October 2014, they may have thought they would have a stronger case if they waited until they could have the Death Certificate voided or amended. They may have thought that with time, more changes would occur to further support their contention that Jahi was not dead. But the Death Certificate has not been voided or amended, and there have been no changes.

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Although they could have and should have returned to Judge Grillo, it appears they elected instead to put their case before a different judge and the jury in their medical malpractice action, in the hope of obtaining a more favorable outcome.

A Final Judgment declaring Jahi legally dead under California law has been entered, it is fixed and permanent, and not subject to change. But if this issue were to be re-litigated, the matter began and should be continued before Judge Grillo.

See also UCSF Benioff Chilren's Hospital Oakland's Joinder in The Demurrer and Notice of Related Case and Application To Order Cases Related filed by co-defendant, Frederick S. Rosen M.D.

Dated: November 23, 2015

GALLOWAY, LUCCHESE, EVERSON & PICCHI

By: _____
KAREN A. SPARKS, ESQ. #167397
Attorneys for Defendant
UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND

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PROOF OF SERVICE

I declare under penalty of perjury that:

I am a citizen of the United States and am employed in the County of Contra Costa. I am over the age of eighteen years and not a party to the within action. My business address is 2300 Contra Costa Boulevard, Suite 350, Pleasant Hill, CA 94523-2398.

On the date set forth below, I caused the attached MEMORANDUM OF POINTS AND AUTHORITIES IN SUPPORT OF UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND'S DEMURRER TO FIRST CAUSE OF ACTION AND MOTION TO STRIKE PORTIONS OF FIRST AMENDED COMPLAINT; REQUEST FOR JUDICIAL NOTICE to be served on the parties to this action as follows:

I retained **UNITED PARCEL SERVICE** to serve by overnight delivery a true copy thereof on the parties as set forth on the attached service list. C.C.P. §§1013(c), 2015.5.

Executed on November 23, 2015 at Pleasant Hill, California.

Debbie Miller

Debbie Miller

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MCMATH (WINKFIELD) V. CHILDREN'S HOSPITAL

ALAMEDA - NORTHERN DIVISION COUNTY SUPERIOR COURT CASE NO. RG15760730

SERVICE LIST

Bruce Brusavich, Esq. AGNEWBRUSAVICH 20355 Hawthorne Boulevard Second Floor Torrance, CA 90503	Counsel for Plaintiffs
Thomas E. Still, Esq. Hinshaw, Marsh, Still & Hinshaw 12901 Saratoga Avenue Saratoga, CA 95070	Counsel for Defendant Frederick S. Rosen, M.D.
Andrew N. Chang, Esq. Esner, Chang & Boyer 234 East Colorado Blvd., Ste. 750 Pasadena, CA 91101	Counsel for Plaintiffs

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Attorneys for Defendant
UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF ALAMEDA - NORTHERN DIVISION

LATASHA NAILAH SPEARS WINKFIELD; MARVIN WINKFIELD; SANDRA CHATMAN and JAHI McMATH, a minor, by and through her Guardian Ad Litem, LATASHA NAILAH SPEARS WINKFIELD,

Plaintiffs,

vs.

FREDERICK S. ROSEN, M.D.; UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND (formerly Children's Hospital & Research Center at Oakland); MILTON McMATH, a nominal defendant, and DOES 1 THROUGH 100,

Defendants.

Case No. RG15760730

DECLARATION OF JOSEPH E. FINKEL IN SUPPORT OF UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND'S DEMURRER TO FIRST CAUSE OF ACTION AND MOTION TO STRIKE PORTIONS OF FIRST AMENDED COMPLAINT AND REQUEST FOR JUDICIAL NOTICE

Date: January 8, 2016
Time: 2:00 p.m.
Dept: 20
Complaint Filed:
Trial: N/A

Reservation No. R-1686975

I, Joseph E. Finkel, declare as follows:

1. I am an attorney at law duly licensed to practice before all the Courts of the State of California and a member of the law firm of Galloway, Lucchese, Everson & Picchi, attorneys of record for defendant UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND in the above entitled matter.

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2. The Hospital asks the Court to take judicial notice of the following documents from the Court's file in *Winkfield v. Children's Hospital Oakland* Case No. RP13707598, true and correct copies of which are attached hereto:

a. 1/2/2014 Amended Order (1) Denying Petition For Medical Treatment and (2) Granting In Part Application To Seal Portions Of Record [non substantive amendments to 12/26/2013 Order], Exhibit A.

b. 1/17/2014 Final Judgment Denying Petition for Medical Treatment, Exhibit B.

c. 10/3/2014 Writ of Error Corum Nobis And Memorandum Regarding Court's Jurisdiction To Hear Petition for Determination That Jahi McMath Is Not Brain Dead, with accompanying Expert Declarations, Exhibit C 1-6.

d. 10/6/2014 Order Appointing Dr. Paul Fisher As Court Expert Witness Exhibit D.

e. 10/6/14 Letter Of Paul Fisher, M.D., with attached American Academy of Pediatrics' Guidelines for the Determination of Brain Death in Infants and Children, Exhibit E.

f. 10/8/2014 Case Management Order Confirming Petitioner's Withdrawal Of Petition for Writ Of Error Coram Nobis, Exhibit F.

2) The Certificate of Death for Jahi McMath, Exhibit G.

3. A copy of the Certificate of Death for Jahi McMath issued by the Alameda County Clerk on January 13, 2914 is attached here as Exhibit G. The social security number in Box 10 has been redacted by defense counsel. The Hospital has also joined, and incorporated all papers filed in support of, co-defendant, Frederick S. Rosen M.D.'s, demurrer, including a certified informational copy of the Certificate of Death issued by the Alameda County Clerk on May 14, 2015.

3. The Hospital notes that Exhibit C6, the October 3, 2014 Declaration of Alan Shwemon M.D., does not appear to have been included with the other

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Declarations of plaintiff's experts in their October 3, 2014, Writ of Error Corum Nobis, Exhibit C1. However, the Court provided this Declaration to Dr. Fisher for review, so it was a part of the Court record and was relied upon by both parties. 10/6/2015 Letter of Dr. Paul Fisher ¶ 1, Exhibit D.

4. A copy of the Uniform Determination of Death Act, 12A *Uniform Laws Annotated (*Masters Ed. 2008*)* is also attached as Exhibit H for the convenience of the court and counsel.

I declare under the penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 23 day of November, 2015 at Pleasant Hill, California

Joseph E. Finkel #167397

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PROOF OF SERVICE

I declare under penalty of perjury that:

I am a citizen of the United States and am employed in the County of Contra Costa. I am over the age of eighteen years and not a party to the within action. My business address is 2300 Contra Costa Boulevard, Suite 350, Pleasant Hill, CA 94523-2398.

On the date set forth below, I caused the attached DECLARATION OF JOSEPH E. FINKEL IN SUPPORT OF UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND'S DEMURRER TO FIRST CAUSE OF ACTION AND MOTION TO STRIKE PORTIONS OF FIRST AMENDED COMPLAINT AND REQUEST FOR JUDICIAL NOTICE to be served on the parties to this action as follows:

I retained **UNITED PARCEL SERVICE** to serve by overnight delivery a true copy thereof on the parties as set forth on the attached service list. C.C.P. §§1013(c), 2015.5.

Executed on November 23, 2015 at Pleasant Hill, California.

Debbie Miller

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MCMATH (WINKFIELD) V. CHILDREN'S HOSPITAL

ALAMEDA - NORTHERN DIVISION COUNTY SUPERIOR COURT CASE NO. RG15760730

SERVICE LIST

Bruce Brusavich, Esq. AGNEWBRUSAVICH 20355 Hawthorne Boulevard Second Floor Torrance, CA 90503	Counsel for Plaintiffs
Thomas E. Still, Esq. Hinshaw, Marsh, Still & Hinshaw 12901 Saratoga Avenue Saratoga, CA 95070	Counsel for Defendant Frederick S. Rosen, M.D.
Andrew N. Chang, Esq. Esner, Chang & Boyer 234 East Colorado Blvd., Ste. 750 Pasadena, CA 91101	Counsel for Plaintiffs

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A

FILED
ALAMEDA COUNTY

JAN 02 2014

CLERK OF THE SUPERIOR COURT
By _____ Deputy

SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF ALAMEDA

LATASHA WINKFIELD, the Mother of Jahi McMath, a minor Petitioner, v. CHILDREN'S HOSPITAL OAKLAND, Dr. David Durand M.D. and DOES 1 through 100, inclusive Respondents	Case No. RP13-707598 AMENDED* ORDER (1) DENYING PETITION FOR MEDICAL TREATMENT AND (2) GRANTING IN PART APPLICATION TO SEAL PORTIONS OF RECORD. Date: December 23, 2013 Time: 9:30 am Dept: 31

The Petition of Latasha Winkfield as mother of Jahi McMath, a minor, and the motion of petitioner to seal came on for hearing on December 23 and 24, 2013, in Department 31 of this Court, the Honorable Evelio Grillo presiding. After consideration of the briefing and the argument, IT IS ORDERED: (1) the Petition of Latasha Winkfield as mother of Jahi McMath, a minor, is DENIED and (2) the motion of petitioner to seal is GRANTED IN PART.

*The court amends the Order of 12/26/13 to correct typographical errors and address several factual corrections requested by counsel. There are no substantive changes from the prior order.

EXHIBIT A

PROCEDURAL AND FACTUAL BACKGROUND[1]

On December 9, 2013, Jahi McMath, a thirteen year old child, had a tonsillectomy performed at Children's Hospital of Oakland ("CHO"). Following the tonsillectomy Jahi began to bleed profusely from her mouth and nose, and within a matter of minutes, went into cardiac arrest and lapsed into a coma. As of December 26, 2013, Jahi is currently being maintained on a ventilator at CHO.

On December 20, 2013, Latasha Winkfield, the mother of Jahi McMath, filed a verified petition and ex parte application with the court pursuant to Probate Code section 3200 et seq. and 4600 et seq., seeking an order (1) authorizing the petitioner (Jahi's mother) to make medical care decisions for Jahi; and (2) for an injunction under to prohibit respondent CHO from withholding life support from Jahi. (Probate Code sections 3201, 4766, 4770.) The court set the application for hearing at 1:30 p.m. on December 20, 2013, in Department 31, and requested respondent CHO to submit written opposition to petitioner's ex parte application.

On December 20, 2013, the court heard Petitioner's application in Department 31. Christopher B. Dolan appeared for the petitioner and Douglas C. Straus appeared for respondent CHO. At the hearing, respondent CHO submitted its opposition papers and argued that respondent CHO had no duty to continue mechanical ventilation or any other medical intervention for Jahi, because she was deceased as the result of an irreversible cessation of all functions of her entire brain, including her brain stem. (Health & Safety Code section 7180.) In support of its position, respondent submitted the physician declarations of Robert Heidersbach,

[1] Due to the confluence of facts concerning the medical records of a minor and the publicity that accompanied this case, the parties presented many of their arguments to the court in chambers and supported those arguments with offers of proof. The court has attempted in this order to reflect and address all the issues raised in the case even if they were not formally presented and preserved in court filings and transcribed hearings.

MD, Sharon Williams, MD, and Robin Shanahan, MD. Dr. Heidersbach and Dr. Shanahan were the examining physicians who determined Jahi's medical status, *i.e.*, brain dead. The physician declarations, read together, unequivocally stated that Jahi was considered brain dead in accordance with accepted medical standards, and that there was no medical possibility that Jahi's medical condition was reversible, or that she would recover from her present condition, and that there was no medical justification to provide further medical intervention. Stated more plainly, CHO argued that Jahi was legally dead, as defined by Health and Safety Code section 7180 and 7181, and that neither Probate Code sections 3200 or 4600 et seq. authorized medical treatment of legally dead persons.[2] Petitioner responded with anecdotal evidence regarding Jahi's condition, and stated that Jahi was responsive to her mother's verbal stimulation, and to physical touching of her feet.

During oral argument on December 20, 2013, the court asked respondent's counsel whether the two examining physicians were affiliated with CHO.[3] Respondent's counsel responded that Drs. Heidersbach, and Shanahan did not work for CHO, that each satisfied the criteria for independence under Health and Safety Code section 7181, and thus intervention by the court was neither warranted, nor authorized by law. In effect, respondent's counsel argued that the court did not have jurisdiction to review the physicians' diagnosis of brain death because

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[2] It would appear to be self evident that where legal death has occurred, one cannot invoke the provisions of Probate Code sections 3200 and 4600 to appoint a guardian to make health care decisions on behalf of a deceased person, *i.e.*, a person for whom additional medical treatment would be futile. There are specific statutory requirements for dealing with the remains of deceased persons. (Health and Safety Code section 7000 et seq.) The issue presented by the petitioner in the instant matter was more complex: whether the petitioner's daughter was entitled to medical treatment in the form of life support (nutrition, intravenous fluids, ventilator breathing support, etc.) because her daughter was not legally dead. The issues in this case as presented by the petitioner necessarily required the court to reach the threshold issue of whether petitioner's daughter was legally dead.

[3] Health and Safety Code section 7181 states that a diagnosis of brain death requires confirmation by a second, independent physician.

two independent physicians had made the determination in compliance with Health and Safety Code section 7180 and 7181. On further questioning by the court, however, respondent's counsel conceded that both Drs. Heidersbach and Shanahan maintained hospital privileges with CHO. The declarations submitted by Drs. Heidersbach, and Shanahan both self-describe their status as "a member in good standing of the medical staff of Children's Hospital & Research Center at Oakland." (Heidersbach Dec., Para 1; Shanahan Dec., para 1.)

Because Health and Safety Code section 7181 requires confirmation of brain death by an independent physician (but does not define or otherwise set a standard for determining independence), the court determined that, on the unique facts of this case,[4] the independent second opinion required by section 7181 should be provided by a physician who had no affiliation with CHO. The court ordered the parties to meet and confer to select a physician unaffiliated with CHO to provide the second independent opinion required by Health and Safety Code sections 7180 and 7181. The parties met and conferred during a break in the hearing and CHO presented the court with the names of five physicians affiliated with the University of California San Francisco Medical School. Petitioner did not provide the names of any licensed California physicians as proposed independent experts. Counsel for Jahi stated he could not consent to the process because he stated that consent could be interpreted that the independent physician then could make a pronouncement of brain death that would authorize termination of support.

[4] The unique facts of this case include the fact of both affiant physicians being members of the CHO medical staff, the complete absence from the record of any information from which the court could determine whether the physician providing the second opinion was an "independent physician" within the meaning of Health and Safety Code section 7181, and the facts and circumstances surrounding Jahi's treatment while under the care of CHO, *i.e.*, immediate and dramatic death following a routine surgical procedure (a tonsillectomy), with virtually no information surrounding the circumstances of her treatment and death provided by CHO other than publically describing the outcome of the surgery as "catastrophic."

By order dated December 20, 2013, the court temporarily restrained CHO from changing Jahi's level of medial support. The order stated in part: "Respondent CHO, its agents, employees, servants and independent contractors are ordered to continue to provide Jahi McMath with the treatment and support which is currently being provided as per the current medications and physicians orders until further order of the court." The order also continued the hearing to Monday, December 23, 2013, and directed CHO to contact the UCSF physicians to determine whether any of them was available to examine Jahi and to provide the second independent opinion required by section 7181.

On Monday December 23, 2013, the court reconvened the hearing. At the hearing, respondent's counsel advised the court that the UCSF physicians had declined to provide a second section 7181 opinion on the advice of counsel, as pending merger discussions between UCSF and CHO could raise concerns regarding the independence of the UCSF physicians. In place of the UCSF physicians, CHO's counsel offered the appointment of Paul Fisher, MD, the Chief of Child Neurology for the Stanford University School of Medicine, as the physician to provide the second, independent physician's opinion pursuant to Health and Safety Code section 7181. Petitioner opposed the process but conceded that if the process would go forward that Dr. Fisher was qualified. During the December 23 hearing, petitioner's counsel also requested that Paul A. Byrne, MD be allowed to examine Jahi and provide a second section 7181 opinion, or alternatively, to provide expert testimony at the hearing.

By order dated December 23, 2013, the court appointed Dr. Fisher as the independent 7181 physician. Pursuant to that order, Dr. Fisher examined Jahi the afternoon of December 23, 2013. The court also continued the hearing to December 24, 2013, to receive Dr. Fisher's report and testimony from a CHO physician (Dr. Shanahan) who first determined that Jahi was brain

dead, as of December 11, 2013. By separate order dated December 23, 2013, the court extended the restraining order through December 30, 2013, or such other date as the court might later determine.

On December 24, 2013, this court, during closed and public sessions, received testimony from Dr. Shanahan and Dr. Fisher. During the course of the hearings, the court was presented with and entered into evidence Dr. Shanahan's and Dr. Fisher's examination notes, as well as documents setting forth the standards for determining brain death in infants and children. (See, e.g., Exhibit 1 (Dr. Fisher's examination notes); Exhibit 2 (Guidelines for Determination of Brain Death in Infants and Children: An Update of the 1987 Task Force Recommendation. Court); Exhibit 3 (Pediatrics, Official Journal of the American Academy of Pediatrics, August 28, 2011, Guidelines for Determination of Brain Death in Infants and Children: An Update of the 1987 Task Force Recommendation); Exhibit 4 (Table 3 of Exhibit 3); Exhibit 5 (Checklist, Brain Death Examination for Infants and Children); Exhibit 6 (Shanahan Declaration filed 12/20/13); and Exhibit 7 (Consultation and Examination notes of Robin Shanahan MD dated 12/11/2013).[5] The court provided Petitioner's counsel the opportunity to cross examine both Dr. Fisher and Dr. Shanahan.

Dr. Fisher initially testified in a closed session. Dr. Fisher's written report served as his opening statement and counsel for petitioner in cross-examination questioned Dr. Fisher about the accepted medical standards for determining brain death in minors, his physical examination of Jahi, and his analysis. At the conclusion of Dr. Fisher's cross-examination, petitioner's counsel stipulated that Dr. Fisher conducted the brain death examination and made his brain

[5] The court also received and considered the vita curricula of Dr. Fisher and Dr. Byrne. To provide a complete record, the court on its own motion augments the record to include those two documents as Exhibits 8 and 9.

death diagnosis in accord with accepted medical standards. In the open session immediately following, Dr. Fisher opined that Jahi was brain dead under accepted medical standards.

Dr. Shanahan then testified in a closed session. Dr. Shanahan testified as to the accepted medical standards for determining brain death in minors, the examination of Jahi that she conducted on December 11, 2013, and her conclusion on December 11, 2013, that Jahi was brain dead as of that date. Petitioner's counsel was then provided with the opportunity to cross examine Dr. Shanahan.

At the conclusion of Dr. Shanahan's cross-examination in closed session, petitioner's counsel objected to Dr. Shanahan's testimony. The court overruled the objection. Petitioner's counsel then requested a continuance to review additional medical records more carefully, to have time to consult an expert regarding Dr. Shanahan's examination of Jahi, and, if appropriate, to conduct further cross-examination of Dr. Shanahan. The court denied the request for a continuance. The court reasoned that the issue before the court was limited to whether the attesting physicians had conducted the 7180 and 7181 examinations in accord with accepted medical standards. The court determined, based on the testimony and medical records provided in the closed session (Exhibits 1 [Fisher notes] and 7 [Shanahan notes]), that although Jahi's complete medical records were relevant to the cause of her death they were not relevant to whether she had suffered brain death as defined under section 7181. Dr. Shanahan was then sworn in open court, and testified that Jahi was brain dead on December 11, 2013, under accepted medical standards.

The Court then took the matter under submission. The court returned to the bench after a brief recess and then denied the petition and dissolved the TRO effective 5:00 p.m. December 30, 2013.

ANALYSIS:

JURISDICTION OF THE COURT

During the initial and subsequent hearings, respondent's counsel argued that after two attesting physicians have determined a person to be brain dead pursuant to Health and Safety Code sections 7180 and 7181, that the court had no jurisdiction to review the issue. Or stated another way, counsel argued that the determination of brain death was a matter for physicians, and not judges to decide, and the court lacked jurisdiction to review the physicians' determination of brain death.

It is true that physicians, and not courts, are uniquely qualified (and authorized by statute) to make the determination of brain death, but it does not follow that such determinations are insulated from all judicial review. (*Dority v. Superior Court* (1983) 145 Cal. App.3d 273, 278.) In *Dority* the trial court appointed a guardian for an infant who had been determined by physicians to be brain dead under Health & Saf. Code, section 7189(a)[6], and after hearing unrefuted medical testimony concluding that the infant was brain dead, the trial court ordered the temporary guardian to give the appropriate consent to the health care provider to withdraw life support. (*Dority*, 145 Cal.App.3d at 276.) The child's parents and counsel for the minor petitioned for a writ of prohibition against removing the life support device. The Court of Appeal denied the writs and held that the trial court's order for withdrawal of the life support system, after hearing the medical evidence and taking into consideration the rights of all the parties

[6] It appears that the reference to Health & Saf. Code section 7189(a) might be a typographical error. Former section 7189, as operative during 1983, was added by Stats.1976, c. 1439, § 1, related to the revocation of health care directives, and was repealed by Stats.1991, c. 895 (S.B.980), § 1. Health & Saf. Code section 7180, the operative section for determining death as of 1983 (the year in which the events underlying *Dority* occurred) was added by Stats.1982, c. 810, p. 3098, § 2, and would have been the operative statute for determining death at that time.

involved, and after finding that the infant was dead in accordance with applicable statutes, was proper and appropriate. (*Dority*, 145 Cal.App.3d at 279.)

Dority acknowledged "the moral and religious implications inherently arising when the right to continued life is at issue," but concluded that the court has jurisdiction to resolve the issue. *Dority* recognized "the difficulty of anticipating the factual circumstances under which a decision to remove life-support devices may be made, [and] determined that it would be "unwise" to deny courts the authority to make such a determination when circumstances warranted." (*Dority*, 145 Cal.App.3d at 275.)

Dority states "[t]he jurisdiction of the court can be invoked upon a sufficient showing that [1] it is reasonably probable that a mistake has been made in the diagnosis of brain death or [2] where the diagnosis was not made in accord with accepted medical standards." (*Dority*, 145 Cal.App.3d at 280.) *Dority* is silent on what showing is necessary to establish "reasonable probability of a mistake." *Dority* and the statutes, sections 7180 and 7181, are silent as to when a diagnosis is made "in accord with accepted medical standards." *Dority* does not state that the two identified bases for jurisdiction are exclusive and the statute does not state they are exclusive. The court interprets the statute and holds that application of the statute permits an inquiry into whether the second physician was independent. The court's jurisdiction can be invoked on a showing that the second physician required by section 7181 was not "independent."

In this case there is clearly was a conflict between the party representing Jahi and the health care providers as to whether brain death had occurred and whether further medical intervention was warranted. Petitioner presented evidence that her daughter, Jahi, was responsive (reacted to) her touch (Winkfield Decl. at para. 9), arguably suggesting that it was possible that a mistake has been made in the diagnosis of brain death. Petitioner presented

evidence that CHO denied petitioner's request to have an independent physician examine Jahi and her studies and records (Winkfield Decl., para. 19) and that CHO repeatedly refused to provide petitioner with Jahi's medical records under the rationale that the hospital does not provide medical records of patients that they are still treating (Winkfield Decl. at paras. 20, 21).[7] These facts cast doubt on the neutrality of CHO and therefore also on the independence of the physicians who were "member[s] in good standing of the medical staff of Children's" who had examined Jahi and made findings of brain death. These facts are sufficient to invoke the jurisdiction of the court to review whether the diagnosis was made by an independent physician in accord with acceptable medical standards.[8]

NATURE OF THE HEARING AND RELATED DUE PROCESS CONCERNS.

Counsel for petitioner objected that petitioner was not provided a full and fair opportunity to present evidence regarding whether Jahi had suffered brain death. Specifically, counsel for petitioner asserted that petitioner was not provided timely access to Jahi's complete medical files, that he needed additional time in which to prepare for cross-examination, and that he had the right to present a competing physician to provide testimony on the issue of brain death.

Health and Safety Code sections 7180 and 7181 do not provide any guidance regarding the nature of a proceeding to address brain death under those sections. *Dority*, supra, 145

[7] As of the hearing on Friday December 20, 2013, petitioner and petitioner's counsel had not yet received copies of Jahi's medical records.

[8] There was some conflict in the argument at the December 20 hearing as to whether petitioner had been allowed to have a physician examine Jahi and/or review the records of Drs. Shanahan and Heidersbach, the physicians who declared Jahi to be brain dead. CHO's counsel (Mr. Strauss) contended that petitioner had consulted with three physicians of her choosing, each of whom confirmed the diagnosis of brain death. Petitioner's counsel denied Mr. Strauss' representation and further alleged that Jahi's medical records had not been provided to petitioner or petitioner's designated physicians, thereby precluding any meaningful review of Drs. Shanahan's and Heidersbach's diagnoses of brain death.

Cal.App.3d 273, 276, did not address the nature of a proceeding under section 7181. The Uniform Determination of Death Act prepared by the Uniform Law Commission does not address the nature of a proceeding. The court can discern three options for categorizing the nature of the proceeding: (1) a summary judicial review of physician reports; (2) a focused proceeding that permits limited discovery and presentation of evidence; and (3) a civil proceeding with challenges to the pleadings under CCP sections 430.10 and 435, discovery rights under CCP section 2016 et seq, motions for summary judgment under CCP section 437c, and a full trial on the merits.

The court rejects the first option as failing to provide appropriate due process to the interested parties. If the determination were so simple that the court could resolve it on the basis of declarations, then the court would not need to be involved at all in the process. (*Dority*, 145 Cal.App.3d at 278 [If the family and physicians agree, then "we find it completely unnecessary to require a judicial "rubber stamp" on this medical determination"].) If the determination is not simple, then the interested parties are entitled to cross-examine the physicians and to present their own evidence.

The court finds the second option consistent with the apparent intent of the legislature, California case law, and due process. Health and Safety Code sections 7180 and 7181 concern a single factual issue that is medical in nature. Physicians should be able to make the required examination and complete the required analysis in a relatively short time period. The legislature in Health and Safety Code section 1254.4 states that after a finding of brain death under section 7180, a hospital must continue previously ordered cardiopulmonary support for a "reasonably brief period" to afforded family or next of kin the opportunity to gather at the patient's bedside before removal of the support and that "in determining what is reasonable, a hospital shall

consider the needs of other patients and prospective patients in urgent need of care." This suggests that following a finding of brain death under section 7180, any challenge to the finding also be completed in relatively brief period.

California case law indicates that trial courts have conducted hearings under section 7180 expeditiously. In *Dority*, the physicians found no brain activity on November 22 and again about about one month later (mid-December), and the trial court held a hearing on January 17 and 21. The testimony at the *Dority* trial court hearing was unrefuted. Although *Dority* did not address the nature of the proceeding or hearing, if also did not criticize the conduct of the trial court. (*Kinsman v. Unocal Corp.* (2005) 37 Cal.4th 659, 680 [An opinion is not authority for propositions not considered].)

Regarding due process, the Court has considered the following general principles as stated in *Oberholzer v. Commission on Judicial Performance* (1999) 20 Cal. 4th 371, 390-391:

> Under the California Constitution, the extent to which procedural due process is available depends on a weighing of private and governmental interests involved. The required procedural safeguards are those that will, without unduly burdening the government, maximize the accuracy of the resulting decision and respect the dignity of the individual subjected to the decision making process. Specifically, determination of the dictates of due process generally requires consideration of four factors: [1] the private interest that will be affected by the individual action; [2] the risk of an erroneous deprivation of this interest through the procedures used and the probable value, if any, of additional or substitute safeguards; [3] the dignitary interest of informing individuals of the nature, grounds and consequences of the action and of enabling them to present their side of the story before a responsible governmental official; and [4] the government interest, including the function involved and the fiscal and administrative burdens that the additional or substitute procedural requirements would entail.

The first three considerations, the private interest, the risk involved, and the dignitary interest of the proceeding, all suggest that the due process rights of the party affected by a physician's determination of death are substantial. The fourth factor, the government interest in the form of administrative burden, is addressed by the focused nature of the inquiry under Health and Safety Code sections 7180 and 7181.

The court finds the third option to be inconsistent with the apparent purpose of the statute and the related statutes. The inquiry is focused and Health and Safety Code section 1254.4 suggests that the proceedings be commenced and concluded in a "reasonably brief period."

The court finds that the nature of the proceedings is that of a regular civil proceeding, but that the trial court has the discretion to focus the case on the limited issues presented and to expedite and narrow the proceedings accordingly. Paraphrasing *Dority*, 145 Cal.App.3d at 275, "Considering the difficulty of anticipating the factual circumstances under which a decision to remove life-support devices may be made, [limiting the discretion of the court to fashion the proceedings to the circumstances] may ... be unwise." The trial court may issue orders shortening time to ensure that the case is not unduly prolonged, the trial court may expedite and limit discovery under CCP section 2019.020(a) and 2019.030, and the court may limit the scope of the evidence presented at the hearing under Evidence Code section 352.

This court endeavored to provide petitioner with due process while completing the proceeding in a "reasonably brief period." CHO provided some medical records to petitioner late on Friday December 20 and provided more complete records to petitioner's counsel on Monday December 23, 2013. The court appointed its own independent physician to examine Jahi on Monday December 23, and counsel for petitioner was present during that examination.

On Tuesday December 24, counsel for petitioner had the opportunity to cross-examine both Dr. Fisher and Dr. Shanahan.

During the proceedings, counsel for petitioner at various times requested that Paul A. Byrne, MD be allowed to examine Jahi and provide a second section 7181 opinion, or provide expert testimony at the hearing, or to review Jahi's records to assist in the cross-examination of Dr. Shanahan. Petitioner withdrew the request that Dr. Byrne be allowed to examine Jahi and provide an opinion based on his own examination. Petitioner did not pursue his request that Dr. Byrne provide expert testimony. During the discussions between the court and counsel it became apparent through a review of Dr. Byrne's publications that were the court to hold an Evidence Code 402 hearing to determine whether Dr. Byrne was qualified as an expert under Evidence Code 720 and *Sargon Enterprises, Inc. v. University of Southern Cal.* (2012) 55 Cal.4th 747, that Dr. Byrne might not qualify as an expert based on his religious and philosophical approach to the definition of death and the possibility that he would not be able to apply accepted medical standards. In addition, it became apparent that testimony and documents regarding the cause of death, as opposed to the fact of death, were not relevant to the court's inquiry. The court exercised its discretion in not continuing the hearing to permit petitioner to review Jahi's records to assist in the cross-examination of Dr. Shanahan. The court reasoned that the examinations were both under the accepted medical standards, the medical determinations were consistent, and that the detriment of a prolonged proceeding would materially outweigh any probable benefit to the court in making the limited finding required by section 7181.

The court acted consistent with the trial court in *Alvarado by Alvarado v. New York City Health & Hospitals Corp.* (N.Y.Sup.,1989) 145 Misc.2d 687, 698, 547 N.Y.S.2d 190, *order vacated and appeal dismissed as moot,* 157 A.D.2d 604, 550 N.Y.S.2d 353 (1st Dep't 1990),

where the court addressed a similar situation and stated, "In the instant case, the Alvarados were notified before a determination was made, were given an opportunity to obtain an independent medical evaluation, and were offered a chance to have the matter discussed with religious leaders and friends. Therefore, it cannot be said that the family was deprived of its due process rights to participate in the medical care of the child."

FINDING OF BRAIN DEATH UNDER HEALTH AND SAFETY SECTIONS 7180 AND 7181.

A trial court may "hear testimony and decide whether the determination of brain death was in accord with accepted medical standards." (*Dority*, 145 Cal.App.3d at 279.) The law is unclear whether the court's determination is under the preponderance of the evidence standard, the clear and convincing evidence standard, or some other standard. This court applies the clear and convincing evidence standard.

The court is guided by *In re Christopher I* (2003) 106 Cal.App.4th 533, 552, where the court addressed the standard to be applied when removing life support from a minor who was in a persistent vegetative condition. In *Christopher*, the Court of Appeal noted that the Welfare and Institutions Code requires either proof by a preponderance of the evidence or clear and convincing evidence, depending on the rights being adjudicated, and then stated, "Given the impact of this decision on Christopher, imposition of the highest standard within the Welfare and Institutions Code - the clear and convincing standard of proof - is appropriate." The court went on to review the law in different states and concluded "The evidentiary standards employed by other courts considering withholding or withdrawal of life-sustaining treatment from

incompetent patients reinforce our belief that the clear and convincing standard is the correct one."

The court notes that although *Christopher* concerned a minor in a persistent vegetative condition, and, although there are medical differences between a coma, a persistent vegetative state, and brain death, those differences pale in comparison to the difference between being legally alive and being legally dead. When a court is called on to determine whether a person has suffered brain death and is now dead under the law or can have support withdrawn and will become dead under the law, the court must make that finding by clear and convincing evidence.

The court heard the testimony of Dr. Fisher and Dr. Shanahan. Both doctors presented consistent testimony that established the accepted medical standards for determining brain death in minors. Dr. Shanahan conducted a physical examination of Jahi on December 11, 2013, and Dr. Fisher conducted an examination on December 23, 2013. Both doctors conducted their examinations consistent with the accepted medical standards and both doctors reached independent conclusions of brain death based on their application of the standards to Jahi's condition. In addition, Dr. Shanahan reviewed an EEG taken on or about December 11, 2013, and Dr. Fisher reviewed a different EEG taken on December 23, 2013, and those tests reinforced their conclusions. Dr. Fisher conducted an additional test, a cerebral profusion test, and that test was also consistent with the conclusion of brain death. This clear and convincing evidence was the basis of the court's conclusion on December 24, 2013, that Jahi had suffered brain death and was deceased as defined under Health and Safety Code sections 7180 and 7181.

The court is mindful of the language in *Dority* that states the fact of brain death "does not mean the hospital or the doctors are given the green light to disconnect a life-support device from a brain-dead individual without consultation with the parent or guardian. Parents do not lose all

control once their child is determined brain dead," and that a parent should be fully informed of a child's condition and have the right to participate in a decision of removing the life-support devices. (*Dority*, 145 Cal.App.3d at 279-280.) (See also, Health & Safety Code section 1254.4 [requiring reasonable amount of time to accommodate family in event of declaration of brain death].) The court expressly does not address whether that consultation and opportunity for participation required by Health & Safety Code section 1254.4 occurred in this case.

APPLICABILITY OF PROBATE CODE SECTIONS 4735 AND 4736.

Petitioner's initial memorandum argued that if under Probate Code section 4735 CHO made a determination to decline to comply petitioner's instructions on the basis that it would be "medically ineffective health care or health care contrary to generally accepted health care standards," then under Probate Code section 4736 CHO had the obligation "to make all reasonable efforts to assist in the transfer of the patient to another health care provider or institution that is willing to comply with the instruction or decision" and had the obligation to "[p]rovide continuing care to the patient until a transfer can be accomplished or until it appears that a transfer cannot be accomplished."

Probate Code section 4736 appears to apply only when is it arguable whether the proposed health care would be medically effective. The court finds that Probate Code 4736 does not apply after a determination of death. The court notes that Probate Code section 4736 provides for some time to move a patient and Health and Safety Code section 1254.4 provides a "reasonably brief period" for family to gather at the bedside. Therefore, both statutes provide for a brief period following a determination of brain death before a hospital can remove all support. The court makes no findings and issues no orders under Probate Code sections 4735 and 4736.

MOTION TO SEAL

The Order of December 23, 2013, stated, "The court anticipates that the hearing will be closed to the public under CRC 2.550 et seq. because it involves the medical records of a minor." On December 23 and 24, 2013, petitioner moved to close the hearing in part and to seal and/or redact certain exhibits.

The court CLOSED the courtroom and SEALS the record on the oral testimony provided by Dr. Fisher and Dr. Shanahan in which they detailed their examinations of Jahi. This testimony was provided in chambers with a court reporter present.

The court REDACTS Exhibit 1 (Dr. Fisher's examination notes) in part because the redacted portion is not pertinent to the issues before the court and Jahi's family has an overriding privacy interest in the material that outweighs the public interest in the information. The court permits disclosure of the remainder of Exhibit 1. Although the exhibit reflects Dr. Fisher's examination of Jahi, Dr. Fisher was acting as a court appointed expert on a matter that petitioner had placed at issue in this case.

The court DOES NOT SEAL Exhibits 2-5. These are documents that reflect the accepted medical standards.

The court DOES NOT SEAL Exhibit 6 (Shanahan Declaration filed 12/20/13). This is already in the public file. In addition, although it concerns the medical information of a minor it is conclusory and does not disclose private information.

The court SEALS Exhibit 7. This exhibit reflects Dr. Shanahan's and Dr. Heidersbach's pre-litigation examinations of Jahi. These doctors were acting as agents of CHO and their notes reflect the medical information of a minor.

EXTENSION OF RESTRAINING ORDER, STAY OF THIS ORDER, AND PREPARATION OF JUDGMENT.

The court ORDERS that the Temporary Restraining Order is extended through Monday, December 30, 2013, at 5:00 pm. Until that time, Respondent CHO, its agents, employees, servants and independent contractors are ordered to continue to provide Jahi McMath with the treatment and support which is currently being provided as per the current medications and physicians orders until further order of the court.

In the event that before Monday, December 30, 2013, at 5:00 pm there is a change in Jahi's physiological condition despite CHO provision of the current level of treatment and support and petitioner wants an increased level of treatment and support that CHO is unwilling to provide, then the parties may seek the assistance of the court at any time. The court has provided its contact information to counsel.

The court STAYS the effect of this order until Monday, December 30, 2013, at 5:00 pm to permit petitioner or CHO to file a petition for relief with the Court of Appeal and to seek further relief from that court.

CHO is to submit a proposed final judgment consistent with this order on or before January 9, 2014. (C.R.C. 3.1312.)

The court sets a further case management conference for 1:30 pm on January 16, 2014, in Dept 31. If the case has been resolved or all further near term proceedings will be in the Court of Appeal, then counsel may so inform the court and the court will continue the case management conference to a later date.

IT IS SO ORDERED.

Dated: January 2, 2014

Evelio Grillo
Judge of the Superior Court

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FILED
ALAMEDA COUNTY
JAN 17 2014
By

SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF ALAMEDA

LATASHA WINKFIELD, the Mother of Jahi McMath, a minor Petitioner, v. CHILDREN'S HOSPITAL OAKLAND, Dr. David Durand M.D. and DOES 1 through 100, inclusive Respondents	Case No. RP13-707598 FINAL JUDGMENT DENYING PETITION FOR MEDICAL TREATMENT.

The Petition of Latasha Winkfield as mother of Jahi McMath, a minor, came on for hearing on December 23 and 24, 2013, in Department 31 of this Court, the Honorable Evelio Grillo presiding. The court issued a written order dated December 26, 2013, and an amended order dated January 2, 2014. The court now enters the following JUDGMENT:

(1) the Petition of Latasha Winkfield as mother of Jahi McMath, a minor, is DENIED

(2) the motion of petitioner to seal was GRANTED IN PART as stated in the orders dated December 26, 2013, and January 2, 2014.

(3) the motions of petitioner that respondent perform or permit surgical procedures was DENIED as stated in the order dated January 17, 2014.

Dated: January 17, 2014

Evelio Grillo
Judge of the Superior Court

EXHIBIT B

SUPERIOR COURT OF CALIFORNIA
COUNTY OF ALAMEDA

Case Number: RP13707598

Case Name: Winkfield vs. Children's Hospital Oakland

1. Order 1) on CMC and 2) Denying Request that Deft Perform or Permit Surgical Procedures
2. Final Judgment Denying Petition for Medical Treatment

DECLARATION OF SERVICE BY MAIL

I certify that I am not a party to this cause and that a true and correct copy of the foregoing document was mailed first class, postage prepaid, in a sealed envelope, addressed as shown below by placing it for collection, stamping or metering with prepaid postage, and mailing on the date stated below, in the United States mail at Alameda County, California, following standard court practices.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on January 17, 2014
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Executive Officer/Clerk of the Superior Court
By M. Scott Sanchez, Deputy Clerk

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IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF ALAMEDA

UNLIMITED CIVIL JURISDICTION

LATASHA WINKFIELD,

Plaintiff,

v.

CHILDREN'S HOSPITAL, et al.

Defendants.

Case No.: PR13-707598

WRIT OF ERROR CORUM NOBIS AND MEMORANDUM REGARDING COURT'S JURISDICTION TO HEAR PETITION FOR DETERMINATION THAT JAHI MCMATH IS NOT BRAIN DEAD

INTRODUCTION

Jahi McMath, by and through her Guardian Ad Litem and Mother, Nailah (Latasha) Winkfield, hereby petitions this Court, pursuant to a Writ of Error Corum Nobis, to reverse the brain death determination of Jahi McMath. In the alternative, Plaintiff pleads under the Court's inherent power to affect the interests of justice, that the Court has powers to affect a remedy where, as is here, dramatic changes have occurred making the previous determination now erroneous.

EXHIBIT C-1

Petitioner could not have known of these conditions, i.e., unequivocal evidence of brain existence and function, at the time the Court made its finding. Indeed, no one could as Jahi's brain, according to Dr. Fischer, as confirmed by Cerebral Blood Flow Studies and an EEG (Petitioner's attorney has requested these studies but has of yet received the raw data and images for the scientists to review) at that time, appeared to have met the Brain Death Criteria. Moreover, in the history of the State of California, and apparently the U.S., there has been no case where a supposedly brain dead individual was ever removed not from a vent, but instead, from the facility that wanted to remove the vent. There is but one other case, in the Middle-East, where a young woman, declared brain dead by a host of U.S. doctors, was later examined and treated by the International Brain Research Foundation and she was removed from the stigma of a brain death diagnosis, to an altered state of consciousness.

As can be seen from the Declaration of Christopher Dolan, and that of Phil De Fina PhD, Plaintiff has acted with all due diligence (testing having been preformed less than one week ago) to bring this matter before the court and the interests of justice require the Court enter a New Judgement finding that Jahi does not meet the criteria for brain death.

Petitioner supports this Petition with multiple Declarations from Board Certified experts in the area of Brain Function and Brain Death. Plaintiff is publishing to the Court, and to the world, the evidence which supports these conclusions, as well as a video depicting Jahi McMath following her mother's command. Personal medical details are being revealed, without a wholesale waiver of Jahi's Privacy Rights, to satisfy doubters and to allow others to evaluate the findings of the experts.

It should be noted that these are not Petitioner's experts, these are experts who have stepped forward with an interest in brain research and out of a humanitarian gesture as medical professionals dedicated to the care of patients such as Jahi McMath. No payment for expert opinions has been made by Petitioner or her Attorney.

In the alternative Petitioner provides analysis as to why, using other, statutory mechanisms the Court may exercise its jurisdiction in the interests of the furtherance of justice.

PETITIONER OBJECTS TO CHILDREN'S HOSPITAL

PARTICIPATING IN THESE HEARINGS THEY HAVE NO STANDING

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It is axiomatic that in order for a party to have standing as to come before the court to argue for or against a proposition or motion, they must have standing, an actual interest in the instant controversy. Children's Hospital has no such interest. Their standing during the time of the Injunction Hearings, which played out before this Court in December and January of 2013-2014, was based on the fact that Jahi McMath was within their hospital. Plaintiff sought an Injunction against Children's Hospital removing Jahi's life support. Jahi was at that point characterized by Children's Hospital as merely ventilating a dead body. Additionally, they opposed the Petitioner's efforts to seek a Court Mandate that they care for Jahi as a living human being so as to provide her with basic medical care such as food, insertion of a trachea tube, and other treatments which would have provided Jahi with the best opportunity to improve her condition. Even though Jahi was preserved, thankfully, by the injunction and its extension, and finally the removal of Jahi from Children's Hospital Oakland, Children's Hospital's interest in this case ended when Jahi's body was signed over to the Coroner.

Other than seeking to be right at any costs to avoid some public embarrassment, and to avoid potential liability for the harms caused to Jahi and her family (which could be greatly reduced if they can continue to maintain the artifice of Jahi's death or to advance some agenda other than the specific issues concerning Jahi McMath), Children's Hospital has no "dog in this fight" now.

Petitioner is not seeking to be re-admit to Children's hospital, (indeed, far from it), she does not seek to compel Children's Hospital to do anything. Instead, Petitioner and her daughter, Jahi, seek mercy and justice from this Court to reverse an error that was unknown to anyone at the time of the Court's Determination, that Jahi's "brain death" was a *complete and irreversible cessation of all neurological function,* including at the Brain Stem. So, what justifiable rational does Children's have to argue to keep the shroud of death surrounding Jahi? The Court should rule that Children's Hospital has no standing in the matter.

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WRIT OF CORAM NOBIS[1]

Petitioner's counsel, cross-eyed from researching for a case of a brain death person having their death determination reversed, after days of study, can find no case like the one before the Court. The rational is simple, this is because this has never been attempted or done before. The lack of case law is not a reflection of the fact that no such remedy should be available to Jahi, under the law, it reflects more on how our society has reacted to the pronouncement of brain death and the emergence of protocols involving organ transplant that require prompt determination and rapid harvesting of organs while the heart is pumping blood to the healthy organs. Transplantation is a vital and valuable component to treating the sick in our society, indeed Petitioner's counsel is a registered organ donor. It is not organ donation as a philosophy which has led to this death of evidence and case law, it is the manner in which it must be executed so as to have maximum effect, quickly after brain death has been determined.

Brain death is a concept that developed in the '80s when technology had gotten to the point where the heart could still beat ,yet doctors, needing legal, ethical moral authority through a bright line determination, to determine when organs could be harvested. This led to the Uniform Determination of Death Act in the 80's. The Uniform Determination of Death Act, stated that when one is "brain dead" they no longer have an ability to regain *any* brain activity ever and this, combined with a lack of sensation of pain, justifies organ harvesting. (The reader may find the term harvesting to be offensive. This is the term used within the transplant community).

> The writ of error coram nobis is issued to correct an error of law that is based upon some issue of fact. *People v. Reid*, 195 Cal. 249; *People v. Darcy*, 79 Cal.App.2d 683; *People v. Dale*, 79 Cal.App.2d 370, 179 P.2d 870. Whatever may be said about the inception of the writ, the recognized present purpose is to correct an error of fact which was unrecognized prior to the final disposition of the proceeding. It is not intended as a means of revising findings based on

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[1]A most excellent law review article maybe found authored by Morgan Pickett The Writ of Error Coram Nobis in California *Santa Cara Law Review* (1990) Volume 30, Number (hereinafter "*Pickett*").

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known facts, or facts that should have been known by the exercise of ordinary and reasonable diligence. *People v. Reid*, supra; *People v. Mooney*, 178 Cal. 525; *People v. Cabrera*, 7 Cal.2d 11, *In re Paiva*, 31 Cal.2d 503. To correct an error of fact it is often necessary to modify a legal ruling, order, judgment or decree, but it is the fact and not the law that is the subject of change. *(In re Dyer* (1948, First App. Dist.)) 85 Cal.App.2d 394, 399.)

Where the errors are of "the most fundamental character," such that the proceeding itself is rendered "invalid," the writ of coram nobis permits a court to vacate its judgments. *Hirabayashi v. United States,* 828 F.2d 591, 604 (9th Cir.1987) (quoting *United States v. Mayer,* 235 U.S. 55, 69, 35 S.Ct. 16, 19–20, (1914)). District courts have authority to issue the writ under the All Writs Act, 28 U.S.C. 1651(a), and we review a denial of the writ *de novo* as if it were a dismissal of a claim under 28 U.S.C. § 2255. *Walgren,* 885 F.2d at 1420. (*Estate of McKinney By and Through McKinney v. U.S.* (9th Cir. 1995) 71 F.3d 779, 781.)

Repeatedly it has been said that the writ of error *coram nobis* is a limited writ aimed at reaching errors of fact outside of the record and is available only where no other remedies exist. The office of the writ is to bring to the attention of the trial court errors of fact, which, without negligence on the part of the defendant, were not presented to the court at the time of trial. *People v. Tuthill*, 32 Cal.2d 819, 821; People v. Gennaitte, 127 Cal.App.2d 544, 548.
(*People v. Gamboa* (1956) 144 Cal.App.2d 588, 590.)

The writ of error coram nobis may be used following judgment in a civil proceeding. In *Phelan v. Tyler*, 64 Cal. 80, 82, 83 the Court upheld the use of the Writ in a civil proceeding. Hence a proceeding for writ of error coram nobis constitutes a novel means of attacking a judgment. (*In re Dyer* (1948) 85 Cal.App.2d 394, 400.)

Where an issue in fact has been decided, there is . . .no appeal in the English law from its decision, . . . and its being wrongly decided is not error in that technical sense to which a writ of error refers. So, if a matter of fact should exist, which was not brought into issue, but which, if brought into issue, would have led to a different judgment, the existence of such fact does

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not, after judgment, amount to error in the proceedings. . . . But there are certain facts which affect the validity and regularity of the legal decision itself. . .Such facts as these, however late discovered and alleged, are errors in fact, and sufficient to traverse the judgment upon writ of error. To such cases the writ of error coram nobis applies; "because the error in fact is not the error of the judges, and reversing it is not reversing their own judgment.'[2]

The function of the Writ is to bring to the attention of a court errors of fact which could not have been discovered by the petitioner at an earlier date, and which if known to the court at the time would have prevented entry of the judgment. (*Pickett at p.15 citing e.g., People v. Shipman*, (1965) 62 Cal. 2d 226, 230,; *People v. Tuthill*, (1948) 32 Cal. 2d 819, 821,; *Reid*, 195 Cal. at 255.

Neither Dr. Fischer, Petitioner or even Children's Hospital could have known that an error had been committed stating that all and irreversible brain death had occurred. As no patient has ever lived this long before, and Jahi is a pediatric patient, this fact could only have been and was just actually, discovered in the last month. Petitioner has acted with all due haste (within 4 days).

This error could not have been brought to the attention of the Court within the time to appeal as there was no way to have tested Jahi during that period and, even if she had been tested, the findings would not be as they are now, nine months later. It is this passage of time which creates the evidence that total and irreversible is an error that no one could have predicted. Had the court been informed of what we know now, the court would have ruled Jahi was not brain dead because, as is the case now, she would not have met the definition of brain death.

A petition for a Writ of Error Coram Nobis is the legal equivalent of a simple motion to vacate a judgment. (*Pickett* at 19)

Although the writ may be sought in both criminal and civil actions, the proceedings for it are civil in nature. A petition for the writ does not initiate a new adversary suit or an independent proceeding; it instead is a continuation of the original proceeding. (*Pickett* at 21 *citing In re Paiva (1949) 51 Cal.2d 505.*) It allows the court to reconsider the judgment in light of the evidence of which

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[2] *Pickett* citing

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the Court was previously unaware. (*Pickett* at 23 fn.108 (*citations omitted*).

Herein, for the reasons stated, i.e., that no one could have known during the hearing (which ran fast and furious, with one day only for the independent Neurological exam) of the error of fact that Jahi's condition was not complete and irreversible cessation of al neurological function, including the Brain Stem. Now, in the presence of the facts provided for by Declarations of multiple, independent experts from numerous highly regarded institutions, the Judgment that Jahi McMath is brain dead can no longer stand. It is within this Court's power, jurisdiction and sound judgment to reverse the determination to clear Jahi from the dark cloud of death and to restore her to humanity so she can be treated not as "the body" but as Jahi.

THE COURT HAS JURISDICTION AS A MATER OF CONTROLLING THE JUST ADMINISTRATION OF IT'S ORDER

On December 24, 2013, the Court concluded that there was "clear and convincing" evidence that Jahi had suffered brain death, as defined under *Health and Safety* Code 7180 and 7181, and declared her dead. The question now becomes does the court still retain jurisdiction over this matter and, more specifically, to decide whether Jahi McMath is, currently, brain dead, as defined by those same code section? Petitioner submits that the Court does, indeed, have jurisdiction and that the interests of justice, which are literally those of life or death, demand that this Court exercise that jurisdiction to prevent perpetuation of a grave injustice: continuing to declare that Jahi McMath is dead when she is not.

In *Dority v Superior Court, San Bernardino* (1983) 145 Cal.App.3d 273, a 19 day old infant suffered a medical condition that led to his health deteriorating to the point he was placed on a ventilator. Later, a Cerebral Blood Flow (CBF) study and an Electroencephalograph (EEG) were done showing electro cerebral silence and an absence of blood flow to the brain. The infant's physicians determined that brain death had occurred and recommended removal of life support, i.e., a respirator. The hospital anticipated that even with respiratory support the child's bodily functions could only be maintained for several weeks. The child's organs continued to function beyond expectations and the parents chose to withhold consent to remove life support. The hospital, desirous of removing said

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support, petitioned the court for the appointment of a Temporary Guardian, the Director of the Department of Public Social Services.[3] The court appointed the guardian and, after taking unrefutted medical testimony that the child was brain dead pursuant to the statutory definition, the court declared the child dead and ordered the temporary guardian to provide consent to the healthcare providers to remove the ventilator. The parents and counsel for the minor child petitioned the court for a writ of prohibition against removing the life-support device. Before the court could act on the petition, the infant's bodily functions ceased and the life-support device was removed.

The court, in addressing whether the petition was rendered moot by the child's demise held that "[i]n light of the important questions raised by this case, this court has the discretion to render an opinion where the issues are of continuing public interest and are likely to recur in other cases." (*Dority at* 276.) The court further held that "[the novel medical, legal and ethical issues presented in this case are no doubt capable of repetition and therefore should not be ignored by relying on the mootness doctrine. This requires us to set forth a framework in which both the medical and legal professions can deal with similar situations." (*Id.*) *Dority* recognized "the difficulty of anticipating the factual circumstances under which a decision to remove life-support devices may be made, [and] determined that it would be "unwise" to deny courts the authority to make such a determination when circumstances warranted." (*Dority* at 275.)

In addressing the question of the court's jurisdiction over the review of the determination of brain death, *Dority* states "[the jurisdiction of the court can be invoked upon a sufficient showing that [1] it is reasonably probable that a mistake has been made in the diagnosis of brain death or [2] where the diagnosis was not made in accord with accepted medical standards." (*Dority* at 280.) *Dority* is silent on what showing is necessary to establish "reasonable probability of a mistake."

Like Dority, Jahi McMath's case was, and remains, a matter of international importance raising significant issues of public concern. Therefore, as the court in *Dority* continued to have jurisdiction following the complete death of the baby (both circulatory and brain death), even greater rational

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[3]In *Dority* the parents were suspected to be a cause of the child's brain death and were determined not to be suitable to act in the best interests of the child.

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exists for this court to continue to exercise its jurisdiction here where Jahi's circulatory system and, indeed all of her organs, continue to function and world class experts in Neurology and Brain Death will provide evidence that Jahi *no longer* meets the definition of brain death as she has neuralgic function.

As stated by *Dority , when it is reasonably possible that a mistake has been in the diagnosis of brain death,* the court has jurisdiction to hear the matter. Here, Petitioner has irrefutable evidence, that Jahi is no longer brain dead. Petitioner does not believe it necessary to challenge Dr. Fischer's diagnosis of the caseation of brain activity, at that time. The Petitioner challenges the determination that it was *irreversible* and believes such a proclamation was mistaken. Clearly, Jahi's condition was not "irreversible." This is not a failing of Dr. Fischer, there simply is no case, other than Jahi McMath's, where a pediatric patient has been diagnosed as brain dead but has continued to receive medical treatment and survived this long.

Petitioner, is in possession of current evidence, including MRI evidence of the integrity of the brain structure, electrical activity in her brain as demonstrated by EEG, the onset of menarche (her entering into puberty as evidenced by the beginning of menstruation) and her response to audible commands given by both her mother and an examining physician demonstrating that Jahi McMath's brain death was not "irreversible." Petitioner's experts will testify that Jahi may have, at the time of Dr. Fischer's examination, demonstrated evidence of brain death due to the swelling of her brain following the traumatic events that led to her suffering a loss of oxygen to her brain but, now that the swelling has receded, and she has had time to receive proper post incident medical care, she has demonstrable brain function.

DUE PROCESS

This Court, in it's Order of December 26. 2013, the Court offered the following analysis canceling Jahi's due process rights;

> Regarding due process, the Court has considered the following general principles as stated in *Oberholzer v. Commission on Judicial Performance* (1999) 20 Cal. 4th 371, 390-391:
> Under the California Constitution, the extent to which procedural due process is available depends on a weighing of private and governmental interests involved. The required procedural safeguards are those that will, without unduly burdening the government, maximize the accuracy of the

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> resulting decision and respect the dignity of the individual subjected to the decision making process. Specifically, determination of the dictates of due process generally requires consideration of four factors: [1] the private interest that will be affected by the individual action; [2] the risk of an erroneous deprivation of this interest through the procedures used and the probable value, if any, of additional or substitute safeguards; [3] the dignitary interest of informing individuals of the nature, grounds and consequences of the action and of enabling them to present their side of the story before a responsible governmental official; and [4] the government interest, including the function involved and the fiscal and administrative burdens that the additional or substitute procedural requirements would entail.
>
> The first three considerations, the private interest, the risk involved, and the dignitary interest of the proceeding, all suggest that the due process rights of the party affected by a physician's determination of death are substantial. The fourth factor, the government interest in the form of administrative burden, is addressed by the focused nature of the inquiry under Health and Safety Code sections 7180 and 7181.

Jahi's right to due process requires that this court provide a forum for this matter to be heard and for her determination of death to be reversed.

THE COURT HAS JURISDICTION PURSUANT TO CCP § 128

California Code of Civil Procedure, Section 128, declares that the Court has inherent power "to amend and control its process and orders so as to make them conform to law and justice." (CCP § 128(8).)

> Courts have the inherent power to create new forms of procedure in particular pending cases. "The . . . power arises from necessity where, in the absence of any previously established procedural rule, rights would be lost or the court would be unable to function." (Witkin, Cal. Procedure (2d ed.) Courts, s 123, p. 392.) This right is codified in Code of Civil Procedure section 187 which provides that when jurisdiction is conferred on a court by the Constitution or by statute ". . . all the means necessary to carry it into effect are also given; and in the exercise of this jurisdiction, if the course of proceeding be not specifically pointed out by this Code or the statute, any suitable process or mode of proceeding may be adopted which may appear most conformable to the spirit of this Code." (See also Code Civ.Proc., s 128(8).) As the Supreme Court said in People v. Jordan, 65 Cal. 644 at p. 646, 4 P. 683 at p. 684, "in the absence of any rules of practice enacted by the legislative authority, it is competent for the courts of this State to establish an entire Code of procedure in civil cases, and an entire system of procedure in criminal cases, ..." (See also Citizens Utilities Co. v. Superior Court, 59 Cal.2d 805, 31 Cal.Rptr. 316, 382 P.2d 356 (1963), recognizing the inherent power of courts to adopt "any suitable method of practice . . . if the procedure is not specified by statute or by rules adopted by the Judicial Council.") (At p. 813, 31 Cal.Rptr. at 322, 382 P.2d at 362).

(James v. Superior Court (1978) 77 Cal.App.3d 169, 175.)

The instant petition is truly a case of first impression not only in California but, based on an extensive search of all Federal authorities, nationally. There simply has been no case in which brain death was determined and the patient managed to remove themselves, before Cardiovascular Death,

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from the facility which had received permission from the court to discontinue Life Support. This Court has the inherent power to adopt the requested process, as, in the absence of the Court exercising its inherent power, Jahi McMAth would continue to be declared legally brain dead when she isn't. *Health and Safety Code* Section 7181 specifically limits the legal determination of brain death to circumstances where there is "***irreversible cessation of all functions of the entire brain, including the brain stem.***" This Court, having made such determination, must consider the change in circumstances presented by Plaintiff's evidence which shows that Jahi's condition is now one in which Jahi now has brain function. Should the court refuse to do so Jahi would be barred from regaining her rightful place in our society as a living person.

CONCLUSION

In the interests of justice, and Jahi McMath's dignity and right to be considered a living human being, rather than, as she has been portrayed, a corpse, this Court must grant Petitioner Nailah Winkfield's Writ of Error Coram Noblis petition for hearing/reconsideration of this court's determination of her being brain dead pursuant to California Health and Safety Code Section 7181.

DATED: October 3, 2014

THE DOLAN LAW FIRM

By: _____

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SUPERIOR COURT OF CALIFORNIA

COUNTY OF ALAMEDA

LATASHA WINKFIELD, an individual parent and guardian of Jahi McMath, a minor Plaintiff, v. CHILDREN'S HOSPITAL & RESEARCH CENTER AT OAKLAND, Dr. David Durand M.D. and DOES 1 through 10, inclusive Defendants.	Case No. PR13-707598 **PROOF OF SERVICE**

PROOF OF SERVICE

Latasha Winkfield v. Children's Hospital & Research Center at Oakland, et al.

Alameda County Superior Court Case No. PR13-707598

I, Alma Maciel, declare that:

I am employed in the County of San Francisco, State of California. I am over the age of 18, and am not a party to this action. My business address is 1438 Market Street, San Francisco, California 94102. On October 3, 2014, I served:

WRIT OF ERROR CORUM NOBIS AND MEMORANDUM REGARDING COURT'S JURISDICTION TO HEAR PETITION FOR DETERMINATION THAT JAHI MCMATH IS NOT BRAIN DEAD;

DECLARATION OF PHILIP DE FINA, Ph.D., IN SUPPORT OF PLAINTIFF'S WRIT OF ERROR CORAM NOBIS AND REQUEST FOR REVERES OF JUDICIAL DETERMINATION OF BRAIN DEATH OF JAHI McMATH;

DECLARATION OF CALIXTO MACHADO, M.D., IN SUPPORT OF PLAINTIFF'S IN SUPPORT OF PLAINTIFF'S WRIT OF ERROR CORAM NOBIS AND REQUEST FOR REVERSE OF JUDICIAL DETERMINATION OF BRAIN DEATH;

DECLARATION OF CHARLES J. PRETIGIACOMO, M.D., IN SUPPORT OF PLAINTIFF'S WRIT OF ERROR CORAM NOBIS AND REQUEST FOR REVERES OF JUDICIAL DETERMINATION OF BRAIN DEATH OF JAHI McMATH;

DECLARATION OF ELENA B. LABKOVSKY, PH.D

in said cause addressed as follows:

Douglas C. Straus Brian W. Franklin Noel M. Caughman ARCHER NORRIS A Professional Law Corporation 2033 North Main St., Suite 800 Walnut Creek, Ca. 94596-3759 Facsimile: (925) 930-6620 dstraus@archernorris.com aalter@archernorris.com bfranklin@archernorris.com	***Attorneys for Defendant Children's Hospital & Research Center at Oakland***
David Nefouse Andrea Weddle Alameda County Sheriff's Office Coroner's Bureau 480 4th Street Oakland, CA 94607 david.nefouse@acgov.org andrea.weddle@acgov.org	***Alameda County Coroner's Office***

California Department of Public Health Office of Legal Services 1415 L Street Sacramento, CA 95814	*California Department of Public Health*

/XX/ **(BY OVERNIGHT MAIL)** By enclosing a true copy of the documents in a Fedex envelope addressed to the above recipient(s), sealing and depositing the envelope, with delivery fees prepaid or provided for, and instructions to deliver overnight, at a box maintained by Federal Express in San Francisco, California following ordinary business practices.

/XX/ **(BY ELECTRONIC MAIL)** Based on a court order or an agreement of the parties to accept electronic service, I caused the documents to be sent to the persons at the electronic service addresses listed above.

/ / **(BY MAIL)** By placing a true copy thereof enclosed in a sealed envelope. I placed each such sealed envelope, with postage thereon fully prepaid for first-class mail, for collection and mailing at San Francisco, California, following ordinary business practices.

/ / **(BY PERSONAL SERVICE)** By placing a true copy thereof enclosed in a sealed envelope. I caused each such envelope to be delivered by hand to the addressee(s) noted above.

/ / **(BY PROFESSIONAL MESSENGER SERVICE)** By placing a true copy thereof in a sealed envelope, and causing said envelope to be delivered by professional messenger service to the addressee(s) listed above.

/ / **(BY FACSIMILE)** I caused the said document to be transmitted by facsimile machine to the number indicated after the addressee(s) noted above.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on October 3, 2014, at San Francisco, California.

Alma Maciel

C.2

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SUPERIOR COURT OF CALIFORNIA
COUNTY OF ALAMEDA

LATASHA WINKFIELD, an individual parent and guardian of Jahi McMath, a minor

Plaintiff,

v.

CHILDREN'S HOSPITAL & RESEARCH CENTER AT OAKLAND, Dr. David Durand M.D. and DOES 1 through 10, inclusive

Defendants.

Case No. PR13-707598

DECLARATION OF PHILIP DE FINA, Ph.D., IN SUPPORT OF PLAINTIFF'S WRIT OF ERROR CORAM NOBIS AND REQUEST FOR REVERES OF JUDICIAL DETERMINATION OF BRAIN DEATH OF JAHI McMATH

I, Christopher Dolan, declare as follows:

1. I am an adult natural person, the owner of the Dolan Law Firm, and the attorney of record for jai McMath and Nailah Winkfield. The following facts are known personally to mem and I am competent to testify upon them if I am called to do so.

2. In December of 2013, I began representing Jahi McMath and her mother Nailah. In a very short time period, a series of hearings was held, including one that involved testimony from several neurologists as to whether or not Jahi McMath met the standard and criteria to be

EXHIBIT C-2

determined brain dead and, therefore, have the total and irreversible cessation of all neurologic activity, including in the brain stem. At such time, I had only been involved in the case for a very short time. The hearings were happening on nearly a daily basis and, it being the holiday season, it was difficult to locate any neurologist who could examine Jahi. This was compounded by the fact that Children's Hospital Oakland had taken the position that no physician who w as not already credentialed at Children's Hospital Oakland could examine Jahi or perform any type of procedures upon her.

3. As the court is aware, petitioner sought to have Jahi receive surgery to undergo a tracheotomy and to receive placement of a feeding tube and to prevent Children's Hospital form from remove Jahi from a ventilator. Petitioner was successful in obtaining several injunctions, but was denied its request to have a feeding and trache tube placed in Jahi. The hospital also rfused to provide any new and/or curative treatments to jahi.

4. When Mr Dolan told me that Jahi was being moved to a location outside of the hospital he again asked if I could help him in any way. This was in August of this year.

5. I indicated to Mr. Dolan that the only help that I could provide was to try and assemble a team of world class physicians in Neurosurgery (Dr. Prestigiacomo), EEG readings and interpretation (Dr. Labkovsky), brain death, (Dr. Calixto Machado) and others, who could analyze her condition. I told Mr. Dolan that I would ask Dr. Machado to do a "blind review" of data – not knowing who the patient was – so I could obtain an independent, unbiased view.

6. Before undertaking extensive and expensive testing, I used a BIS monitor to determine if Jahi demonstrated any activity that could indicate that she may have brain function. A BIS monitor is used during surgery when a patient is under anesthesia to determine their level of consciousness. This is important, as you do not want to have the patient in an elevated level of consciousness where they may experience pain. The BIS monitor indicated that there was activity.

7. I then arranged to have Dr. Labkovsky undertake a detailed EEG readings using modern and very sensitive equipment. I felt this was important as I wanted to make sure that the BIS monitor findings were not errant.

8. Dr Labkovsky undertook this examination in early December. Mr Dolan was present and photographed the method and manner in which the electrodes were attached and the equipment was set up to reduce the possibility of any artifacts coming from the ventilator and the other electronics in the room. This test was also preformed to see if further testing, using MRI /MRA was warranted.

9. I myself witnessed the EEG testing. I am familiar with the methods commonly practiced within the community of scientists, doctors and EEG technicians for the administration of these tests. I have participated in numerous such exams as an independent witness. I saw evidence of brain activity, not brain artifacts, in the EEG. One of the most poignant moments was when Nailah Winkfield came into the room and spoke to her daughter saying, "Jahi you need to help me. These people think you are brain dead, I need you to help me show them that you are not" or words to that effect. As she then began crying the electrical activity, as described more fully in Dr. Labkovsky's and Dr. Marchado's reports, was readily identifiable and profound. This was quite material and shocking. I had seen video of Jahi moving on command but this was especially significant as it registered that Jahi had a change in her brain function in response to her mother's commands.

10. After that testing, I consulted with Dr. Charles Prestigiacomo. I had previously alerted him to Jahi and our desire to conduct testing to see if she had intact brain structure of any degree. This is significant because a truly brain dead person with no blood flow to the brain will have their brain liquefy and then there will be no preserved brain structure. He arranged for Jahi McMath to be examined, using Rutgers MRI/MRA, to see if Jahi had brain structure and cerebral blood flow.

11. I flew in Dr. Machado to oversee and review these studies. Dr. Machado is a world leader in the field of brain function and brain death. I wanted him present because he is a staunch defender of the concept of brain death and I knew he would have no hesitation to say that Jahi had brain structure or not. If there was no brain structure then the EEG results could not be confirmed as being possible. Quite simply, no brain structure, no brain activity and therefore you have a confirmation of Brain Death.

12. I undertook these tests both as a scientist as well as for humanitarian reasons. This family wanted to know if what they were observing with their daughter was correlated to objective scientific measurement. Before the testing I had counseled Nailah that if the tests showed no brain structure, and/or no EEG activity, she would have to accept the brain death diagnosis as being irreversible. She tearfully agreed and said, "I know she is in there. People say I am crazy but I know she is in there. I am willing to hear the news, I just need to know."

13. I personally was present at the time of the MRI/MRA at all times. I made the suggestion with my colleagues to do 1 millimeter slices for the greatest accuracy. Mr. Dolan requested that he be allowed to have a media specialist document the events photographical. After the signing of much legal paperwork, such permission was granted.

14. I was present in the MRI/MRA suite and saw Jahi McMath enter the MRI and be secured to provide a stable platform for the examinations. The exam was very thorough and lasted approximately one hour.

15. As the exam was underway Dr. Machado, the MRI tech and myself watched the results on a computer monitor. We unequivocally saw the presence of brain structure including the evidence of ribbons in the brain. This is critical as it showed that the brain, although damaged, was there structurally. Given that it had been nine months since she was declared brain dead I would have expected to see her brain having liquefied. It clearly was not.

16. Additionally we looked for evidence of blood flow. We did not use contrast as Jahi had been out of a hospital setting and we had not done a complete blood workup. We had a limited window to use the MRI. Blood flow was clearly evident. This does not happen if a patient is brain dead.

17. I am also aware that Jahi has entered puberty with the onset of menarche. She has also now had a regular cycle. This is as recent as two months ago. This does not happen if there is the total and irreversible cessation of all neurological function. The Hypothalamus and Pituitary must be functioning to have this occur. The Hypothalamus and Pituitary glands are part of the brain. Therefore this means that she is not brain dead.

18. I have seen many videos where Jahi is responding to specific commands by her mother. This is significant when considered in combination with the EEG findings and MRI/MRA. This is indicative of a patient who is not brain dead. Brain dead people do not respond to voice commands.

19. It is my professional opinion as a Neuro Scientist who has observed hundreds of Brain Exams, and Brain Death Exams, EEG and MRI's that Jahi McMath is not brain dead.

20. I do believe that, quite possibly, when Dr. Fischer preformed his exam Jahi was under suboptimal conditions and that her brain swelling could have caused her to fail the EEG and cerebral blood flow exams and to be unable to move as she is today.

21. The fact that Jahi has Brain Structure and EEG findings could not have been determined as the facility she was in did not wish to be drawn into this public controversy and would not perform such tests.

I declare under the penalty of perjury under the laws of the State of California that the forgoing is true and correct. Signed October____, 2014, in _____, _____.

Phillip De Fina, Ph.D

C 3

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LATASHA WINKFIELD

SUPERIOR COURT OF CALIFORNIA
COUNTY OF ALAMEDA

LATASHA WINKFIELD, an individual parent and guardian of Jahi McMath, a minor Plaintiff, v. CHILDREN'S HOSPITAL & RESEARCH CENTER AT OAKLAND, Dr. David Durand M.D. and DOES 1 through 10, inclusive Defendants.	Case No. PR13-707598 DECLARATION OF CALIXTO MACHADO, M.D., IN SUPPORT OF PLAINTIFF'S IN SUPPORT OF PLAINTIFF'S WRIT OF ERROR CORAM NOBIS AND REQUEST FOR REVERSE OF JUDICIAL DETERMINATION OF BRAIN DEATH

I, Calixto Machado, M.D., declare as follows:

1. I make this Declaration of my own Personal Knowledge in Support of Plaintiff's request to have Jahi McMath declared non-brain dead. If called to testify, I could testify to the following:

2. Attached to this Declaration is a true and correct copy of my Curriculum Vitae as Exhibit "A." It is incorporated herein, is made of my own personal knowledge and constitutes a Business Record under the California Evidence Code.

EXHIBIT C-3

3. In 1976, I graduated from the University of Havana School of Medicine. I completed my Residency at the Institute of Neurology from 1977-1980. I then went on to complete my First Degree of Board Certification in Neurology at the Institute of Neurology in 1980. I followed my First Degree of Board Certification in Neurology with my Second Degree of Board Certification in Neurology at the Institute of Neurology in 1987.

4. Currently, I am a Professor in the Department of Neurological-Clinical Neurophysiology, and the Senior Professor and Researcher in Neurology and Clinical Neurophysiology at the Institute of Neurology.

5. I have been published over twenty (20) times and have received numerous awards in my field. I was originally asked by Phil DeFina, PhD, of the International Brain Research Foundation, to review EEG and MRI studies. The EEG studies were given to me anonymously, meaning that I did not know the patient's name or that the patient was Jahi McMath. Dr. Defina asked me to review the EEG of a brain injured patient, which I did, and then respond to the question of whether she was "brain dead."

6. I reviewed and confirmed that the EEG undertaken by Elena Labkovshp, PhD was performed in accordance with Minimum Technical Standards for EEG Recording in Suspected Brain Death (American Clinical Neurophysiology Society).

7. I processed, with my group in Cuba, the Heart Rate Variability Measurements to access the central autonomic nervous system.

8. I personally oversaw the undertaking of a MRI/MRA done at Rutgers University on September 30, 2014, using all conventional sequences (i.e., T1, T2 in different axis, MRA, Fractional Anisotrpy, etc.).

9. Attached as Exhibit "B" is a true and correct copy of my report prepared after my review of the diagnostic tests and, additionally, information regarding the onset of menarche in

this teen age girl.

10. The MRI shows that the subject had suffered a serious brain injury. It is possible to observe ribbons at the level of the cortex, indicating preservation of neocortex. Had she been brain dead without cerebral blood flow since January of 2014, we would not expect to see the structure of the brain to be as it is now; it would have, most likely, liquefied. This brain did not liquefy, but has maintained tissue structure.

11. In the MRA sequence, done without contrast, it was possible to show slow but intercranial cerebral blood flow. A brain dead patient would not have evidence of blood flow.

12. In my analysis of the patient's heart rate variability, there are remaining spectra in the very low (VLF), low frequency (LF), and median frequency (MB) bands. Also, the frequency of the ventilator is present, but it is possible to observe modulations of amplitude in this peak, which do not only correspond with the ventilator effect.

13. I observed the HRV spectra during three experimental conditions: Basal Record, Photostimulation, and "Mother talks to the patient." Based on the empirical date provided to me, I confirmed that there are clear dynamic changes when comparing the three different conditions, indicating an effect of these stimuli to the modulation of the central autonomic nervous system. In plain language, the EEG showed she had a response to the voice of her mother that was measured on EEG.

14. It is my opinion as an expert in brain death that the EEG Record shows:

a. The neurophysiological data is not consistent with the classical EEG isoelectric pattern found in brain-dead cases.

b. Although there were EKG in derivations, I can appreciate the presence of low voltage EEG true activity.

c. Although the EEG records show the presence of some artifacts, due to patient head

and body movements of electrodes, I can see the existence of EEG activity with a prevalence of diffuse Delta, with superimposed activity within the Alpha and low Beta ranges.

d. Some intermittent Delta and Theta activity is present in a random pattern. The Technologist assured that the electrodes did not have any contact with the ventilator hoses, which might account for artifacts simulating EEG activity.

e. In conclusion, the neurophysiological data derived from this assessment, confirms the preservation of true EEG bioelectrical activity in this case.

15. My review of the MRI shows preservation of intracranial structures and the MRA shows a diminished, but present intracranial cerebral blood flow (CBF). Considering the concept of brain death (BD), that per definition an irreversible absence of CBF should be present, in this case, with more than 9 months of evolution with the possible diagnosis of BD, I would have expected to find the classic description of the "respirator brain" (brain liquefied, without any nervous system structure, etc.). Although recently Eelco Wijdicks et al. described that there is no specific anatomopathology findings in brain-dead cases, and that "respirator brain" no longer exists in BD, this is due to the fact that diagnosed brain-dead cases are usually kept under respirator for hours or a few days, prompted by organ retrieval protocols, or because life support is removed.

16. It is my opinion, as one who is a defender of brain death, and who believes that brain death does occur, and can be confirmed through testing of the type conducted on Jahi McMath, that this patient DOES NOT FULFIL THE BRAIN DEATH CRITERIA AND HENCE SHE IS NOT BRAIN DEAD.

17. The videos I have seen, showing the movement of Jahi's foot and hand at the request of her mother are significant in that there is a request followed, shortly thereafter, by the requested

response. I have seen that the patient responded and then was asked by her mother to respond, again, harder, and in a short span thereafter, the patient did as she was requested.

18. I have been informed that the patient has entered menarche and has had a menstrual cycle. This is inconsistent with brain death as it is the hypothalamus and pituitary which release these hormones. They are located in the brain. Therefore this means that there is brain function.

I declare under the penalty of perjury under the laws of the State of California that the forgoing is true and correct. Signed October____, 2014, in _____, _____.

_____

Calixto Machado, M.D.

C·4

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SUPERIOR COURT OF CALIFORNIA
COUNTY OF ALAMEDA

LATASHA WINKFIELD, an individual parent and guardian of Jahi McMath, a minor

Plaintiff,

v.

CHILDREN'S HOSPITAL & RESEARCH CENTER AT OAKLAND, Dr. David Durand M.D. and DOES 1 through 10, inclusive

Defendants.

Case No. PR13-707598

DECLARATION OF CHARLES J. PRETIGIACOMO, M.D., IN SUPPORT OF PLAINTIFF'S WRIT OF ERROR CORAM NOBIS AND REQUEST FOR REVERES OF JUDICIAL DETERMINATION OF BRAIN DEATH OF JAHI McMATH

I, Charles J. Prestigiacomo, M.D., declare as follows:

1. I am a Board Certified Physician in Neurosugery and I make this declaration of my own personal knowledge in support of Plaintiff's Request to have Jahi McMath declared non-brain dead. If called to testify, I could testify to the following:

2. Attached to this Declaration is a true and correct copy of my Curriculum Vitae as Exhibit "A." It is incorporated herein, is made of my own personal knowledge and constitutes a Business Record under the California Evidence Code.

EXHIBIT C-4

3. In 1993, I graduated from the Columbia University College of Physicians and Surgeons. I then went on to complete my Residency in Neurological Surgery at the Neurological Institute of New York, Columbia-Presbyterian Medical Center. I followed my Residency with a fellowship in Endovascular Neurosurgery at Beth Israel Medical Center, New York, Institute of Neurology and Neurosurgery, Center for Endovascular Surgery.

4. Currently, I am a Professor in the Department of Neurological Surgery and Radiology, and Neurology at the New Jersey Medical School. I am also the Director of Cerebrovascular and Endovascular Neurosurgery at the University Hospital, and the Program Director of the Neurosurgical Residency Program at the New Jersey Medical School. Lastly, I am a Research Professor in the Department of Biomedical Engineering at the New Jersey Institute of Technology.

5. I have reviewed the following material: (1) the MRI of Jahi McMath's Brain, and (2) the MRA of Jahi McMath's Brain.

6. I have the following opinions to a reasonable degree of medical certainty and probability:

7. The brain structure evidence in the MRI is not consistent with an MRI of a patient that has been diagnosed as brain dead over nine (9) months ago.

8. The MRA shows that there is a cerebral blood flow which is inconsistent with the diagnosis of brain dead.

9. A full clinical evaluation under the AMA guidelines was not done by me, however I do not think it is necessary to do so. The MRI and the MRA are confirmatory tests and if they demonstrate that there is the presence of brain structure and blood flow, as is evident here, the clinical exam need not be done to determine brain death. Moreover, some of the tests, like the Sleep Apnea Test, can actually cause additional harm to a patient as it involves removing oxygen from the patient.

I declare under the penalty of perjury under the laws of the State of California that the forgoing is true and correct. Signed October____, 2014, in _____, _____.

_____

Charles J. Prestigiacomo, M.D.

C.5

Christopher B. Dolan (SBN 165358)
THE DOLAN LAW FIRM
The Dolan Building
1438 Market Street
San Francisco, CA 94102
Telephone: (415) 421-2800
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Attorneys for Plaintiff
LATASHA WINKFIELD

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF ALAMEDA

UNLIMITED CIVIL JURISDICTION

LATASHA WINKFIELD,

Plaintiff,

v.

CHILDREN'S HOSPITAL, et al.

Defendants.

Case No.: PR13-707598

DECLARATION OF ELENA B. LABKOVSKY, PH.D.

1. I Elena B Labovsky, PhD am an adult and the following information herein is known to me personally and I am fully competent and prepared to testify upon the same if called upon to do so.
2. Attached hereto as Exhibit A is a true and correct copy of my Curriculum Vitae.
3. In 1984 I received my M.S. in Communication and Electronic Technology, from the Institute of Communication, Leningrad, Russia.
4. In 1989 I received my M.A. in Psychology, from the Department of Psychology, Leningrad State University, Russia.

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EXHIBIT C-5

5. In 1997 I received my Ph.D. in Psychology, from St. Petersburg State University, St. Petersburg, Russia.

6. I am a licensed BCIA-EEG Certified Neurofeedback Provider, # E4734 Illinois.

7. I am currently engaged conducting research into the areas of QEEG/EEG/ERP Techniques for Neuropsychological Research and Practice; Neuropsychology/Pediatric Neuropsychology; eurotherapy (Neurofeedback), and Biofeedback.

8. I have the following relevant training;

2005 **Certificate Program in Clinical Electroencephalography and QEEG,** Pavlov Institute of Physiology of the Russian Academy of Sciences St. Petersburg (Russia)

2005 Certificate Program in Clinical Electroencephalography and Electronic Data Processing, The Mitsar Corporation, St. Petersburg, Russia

2004 Advanced Post-Doctoral Fellowship in Developmental Neuropsychology, Moscow State University, Russia

2004 EEG Clinical Application Program. The Stens Corporation & The Biofeedback Training Institute, St. Charles, USA

2004 Advanced Training Program in Medical Hypnosis, American Society of Clinical Hypnosis- Educational and Research Foundation, Schaumburg, USA

2004 **Functional MRI Visiting Fellowship Program,** Center for Biomedical Imaging, Harvard University, Medical School, Boston, USA

9. I have the following relevant professional and teaching experience

2006 - current **Research Associate,** Department of Psychology, Institute for Neuroscience, Northwestern University

2004-2005 **Neuropsychologist,** Polenov Research Neurosurgical Institute, St. Petersburg, Russia

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2000- 2003 **Visiting Scholar** and **Visiting Professor,** Weinberg College of Arts and Sciences, and School of Continuing Studies, Political Science Department, Northwestern University, IL, USA

1998- 2004 **Director**, Center for Civil Society and International Cooperation, St. Petersburg, Russia

1997-2000 **Associate Professor**, Department of Psychology, St. Petersburg State University, St. Petersburg, Russia

1990-1997 **Assistant Professor,** Department of Psychology, St. Petersburg State University, St. Petersburg, Russia

10. On September 1, 2014 I conducted an EEG/ERP recording and analysis utilizing Mitsar amplifiers (Mitsar-EEG-10/70-201), 21 EEG channels.

11. The software, electrode placement and procedures followed is fully set forth in Exhibit B to my Declaration.

12. Exhibit B represents both the electrode placement and 14 fragments.

13. Attached as Exhibit C is my analysis and conclusions which are summarized below;

The EEG recordings were performed in accordance with Minimum Technical Standards for EEG Recording in Suspected Cerebral Death (American Clinical Neurophysiology Society). Specifically,

A minimum of eight electrodes and reference electrodes to cover the major brain areas;

Interelectrode impedances under 10,000 ohms but over 100ohms;

Integrity of the entire recording system;

Interelectrode distances of at least 10 cm to enlarge the amplitudes and pick up electrical fields

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originating in deep structures.

Sensitivity increase up to 20uV/cm during most of the recording to distinguish ECS from low-voltage output EEG;

Time constant of 0.3-0.4 second;

Simultaneous ECG recording;

The length of the recording is no less than 30 minutes.

The patient's recordings were presented with a low-votage output EEG.

The recordings show prevalence of diffuse Delta with superimposed activity within Alpha and low Beta ranges.

Some intermitent Theta and Alpha activity is present in a random (here and there) pattern.

The areas of maximum electrocerebral activity were identified through visual inspection of the recordings and Low Resolution Brain Electromagnetic Tomography (Loreta) algorithm.

The summarized results are presented in Table 1. The analysis shows that areas with maximal electro-cerebral activity (mostly within Theta range) were better expressed on the left and primarily include fronto-parietal-occipital cortexes.

No response to intermittent photic stimulation (6-16 Hz) was registered.

14. These results demonstrate electrical activity within the brain of Jahi McMath and are inconsistent with a diagnosis of brain death.

I declare under the penalty of perjury under the laws of the State of California that the forgoing is true and correct.

_____ _____

Signature Date

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In summary:

The EEG recordings were performed in accordance with Minimum Technical Standards for EEG Recording in Suspected Cerebral Death (American Clinical Neurophysiology Society).

Specifically,

1. A minimum of eight electrodes and reference electrodes to cover the major brain areas;
2. Interelectrode impedances under 10,000 ohms but over 100ohms;
3. Integrity of the entire recording system;
4. Interelectrode distances of at least 10 cm to enlarge the amplitudes and pick up electrical fields originating in deep structures.
5. Sensitivity increase up to 20uV/cm during most of the recording to distinguish ECS from low-voltage output EEG;
6. Time constant of 0.3-0.4 second;
7. Simultaneous ECG recording;
8. The length of the recording is no less than 30 minutes.

The patient's recordings were presented with a low-votage output EEG.

The recordings show prevalence of diffuse Delta with superimposed activity within Alpha and low Beta ranges.

Some intermitent Theta and Alpha activity is present in a random (here and there) pattern.

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The summarized results are presented in Table 1. The analysis shows that areas with maximal electro-cerebral activity (mostly within Theta range) were better expressed on the left and primarily include fronto-parietal-occipital cortexes.

No response to intermittent photic stimulation (6-16 Hz) was registered.

Report provided by Clinical Psychologist Elena B. Labkovsky, Ph.D., BCIA-EEG

C.6

D. ALAN SHEWMON, M.D.
Professor Emeritus of Neurology and Pediatrics
David Geffen School of Medicine at UCLA

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ashewmon@mednet.ucla.edu

Declaration of D. Alan Shewmon, M.D.

I, Doctor D. Alan Shewmon, do hereby submit this declaration freely, and I have, unless otherwise stated, personal knowledge by review of MRI/MRA studies, records, and reports, as well as viewing two videos of Jahi McMath moving her body parts (foot and arm) following her mother's commands and having discussions with Dr. Calixto Machado, a world renowned expert on brain death, and Dr. Philip DeFina, a neuroscientist with the International Brain Research Foundation. I am competent and prepared to testify as to the below opinions and conclusions if called upon to do so.

Dear Mr. Dolan:

As you know, I am a pediatric neurologist with triple board certification: in Pediatrics, Neurology (with special competence in child neurology), and Electroencephalography. I have had a particular interest in brain death and have published and lectured extensively on the topic, nationally and internationally. I recently retired as Professor of Neurology and Pediatrics at the David Geffen School of Medicine at UCLA and Chief of the Neurology Department of Olive-UCLA Medical Center (a county hospital affiliated with UCLA), while remaining clinically active. My CV provides further details regarding my qualifications to comment on the case of Jahi McMath.

Based on the materials that you have provided to me so far, I can assert unequivocally that Jahi currently does not fulfill diagnostic criteria for brain death. The materials include extensive medical records from St. Peter's University Hospital, which I am still in the process of reviewing, videos of Jahi moving her hand and her foot in response to verbal requests by her mother, images from an EEG done in her apartment on 9/1/14, images of a brain MRI scan done at Rutgers on 9/26/2014, and heart rate variability analysis by my colleague Dr. Calixto Machado based on the EKG channel from the 9/1/14 EEG. I have also spoken by phone with Drs. Machado and DeFina regarding their recent observations of Jahi and the findings of a second EEG done at Rutgers on 9/26/14, which I have not yet received for review.

Jahi does not currently fulfill criteria for brain death on several grounds. First and foremost, the videos and the personal testimonies to me of several trustworthy witnesses of her motor

EXHIBIT C-6

responsiveness (yourself, Drs. DeFina and Machado) leave no doubt that Jahi is conscious, and can not only hear but can even understand simple verbal requests ("move your hand," "move your foot," even "move your thumb") and make appropriate motor responses. Thus, the very first of the "three cardinal findings in brain death," according to the American Academy of Neurology's Practice Parameters for Determining Brain Death in Adults (and all other diagnostic criteria for brain death that have ever been proposed, for that matter) – namely "coma or unresponsiveness" – is not fulfilled.

The recent video of her hand movement to command makes clear that the movement is not a spinal reflex that merely coincidentally happened shortly after the verbal command; the quality of the movement has the appearance of volition and is inconsistent with a spinal reflex. Moreover, the motor responsiveness is reliably reproducible; the movements do not merely occur at random, unrelated to the verbal commands, with some rare temporal coincidence serendipitously caught on video and selectively held up as evidence. I am convinced of this after having seen several videos taken on different occasions and heard the testimony of witnesses (yourself, Drs. Defina and Machado) of the same kind of responsiveness at other times when no video was being recorded. Finally, the movements are specific to the part of the body mentioned in the verbal request. Such motor responsiveness is extremely surprising, given Jahi's history, but it has been documented so many times now that it cannot be denied. This alone, even if there were no additional evidence (which there is), proves that she is not brain dead, not even comatose, but very severely disabled.

The heart rate variability analysis by Dr. Machado provides objective corroborating evidence that Jahi not only has spontaneous modulation of heart rate by the autonomic nervous system (such variability should be completely absent in brain death), but even more impressively that her heart rate changes in response to her mother's voice. This is hard evidence of auditory processing by the brain, if not also of registering of the emotional valence of those auditory signals and frank conscious awareness of them, and it is not a matter of interpretation.

The medical and nursing records document that some months after the formal diagnosis of brain death, Jahi underwent menarche; she recently had her second menstrual period approximately a month or so after the first. The female menstrual cycle involves hormonal interaction between the hypothalamus (part of the brain), the pituitary gland, and the ovaries. Corpses do not menstruate. Neither do corpses undergo sexual maturation. Neither is there any precedent in the medical literature of a brain-dead body beginning menarche and having regular menstrual periods. Hypothalamic function is a brain function, and California's statutory definition of death by neurological criteria requires irreversible absence of *all* brain functions, so even apart from her responsiveness, she would not fulfill the statutory definition of death on the basis of hypothalamic function. (This is not to imply that her hypothalamus is functioning normally: it is not. The point is that there is some preserved hypothalamic function, and a rather remarkable one at that.)

Regarding Jahi's EEG, I am at a disadvantage in not having received yet the EEG disk from Rutgers before you need this declaration. Dr. Machado was present while it was being run, and he assured me that it showed low voltage electrical activity (in contrast to EEGs in brain death,

which should be isoelectric (flat)). I have seen some images (screen shots) of the EEG done in her apartment by Elena Labkovsky, Ph.D., and concerning this I am also at a disadvantage in not having the full raw data to examine. Nevertheless, apart from some obviously artifactual waveforms, which are common in such recordings, there appears to be genuine electrocerebral activity, as described in greater detail in her report and in Dr. Machado's independent declaration. Although the AAN Practice Parameters do not require a flat EEG to make the diagnosis of brain death, Jahi's original diagnosis in Oakland was in fact reinforced by an EEG that was reported to be isoelectric. Thus, with the passage of time, her brain has recovered the ability to generate electrical activity, in parallel with its recovery of ability to respond to commands. A dead brain cannot spontaneously recover electrical function.

Jahi's recent MRI scan shows vast areas of structurally preserved brain, particularly the cerebral cortex, basal ganglia and cerebellum. There is major damage to the corpus callosum and the brainstem, particularly the pons, corresponding to the severe brainstem dysfunction that has been documented in her progress notes from St. Peter's. By contrast, the relative integrity of the cerebral cortex no doubt underlies her ability to understand language and to make voluntary motor responses. I have had personal experience with three chronic brain death cases with MRI or CT scans done after one or more years in that state. The scans showed the brains to be totally liquefied, after such a long time with no blood flow (two of the patients also had blood flow studies at the time, which confirmed persistent absence of intracranial blood flow). Jahi's MRI scan, nearly 10 months after her tragic anoxic-ischemic event and diagnosis of brain death, does not even vaguely resemble those chronic brain death scans. Her brain is not dead and necrotic, but much of it is structurally intact. Her MR angiogram also demonstrates intracranial blood flow, which could have been inferred anyway, since the intact brain tissue implies blood flow sufficient to keep it alive.

Clearly Jahi is not currently brain dead. Yet I have no doubt that at the time of her original diagnosis, she fulfilled the AAN diagnostic criteria, correctly and rigorously applied by the several doctors who independently made the diagnosis then. That diagnosis was even backed up by two ancillary tests: an EEG that was reportedly isoelectric and a radionuclide scan that reportedly showed no intracranial blood flow. A likely explanation for the discrepancy (in fact the only explanation I can think of) is that (1) the standard clinical diagnostic criteria are not as absolutely, 100% reliable as commonly believed, and (2) radionuclide blood flow studies are not sensitive enough to distinguish *no* flow from *low* flow – in technical terminology, from ischemic-penumbra-level flow, i.e., flow that is too low to support brain functioning but just enough to maintain tissue viability.

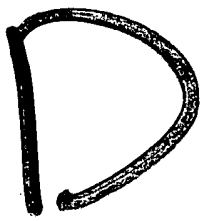
Over a decade ago the Brazilian neurologist Cicero Coimbra proposed the idea of "global ischemic penumbra" (extending a concept from the field of stroke to the whole brain) as a condition of marginal cerebral blood flow that in principle could mimic clinical brain death in every respect, yet the brain is not dead, and some of its suppressed functions are potentially recoverable. Up to now this has remained a plausible but unproved hypothesis. Jahi has now proved that it can occur in clinical reality. I believe that it is the only possible explanation for the discrepancy between her original fulfillment of the brain death criteria and her current lack of their fulfillment.

Regardless of the explanation, the fact remains that Jahi currently does not fulfill brain death diagnostic criteria. She is an extremely disabled but very much alive teenage girl.

Signed this 3rd day of October, 2014, in Los Angeles California under penalty of perjury,

D. Alan Shewmon

D. Alan Shewmon, MD
Professor Emeritus of Neurology and Pediatrics
David Geffen School of Medicine at UCLA



FILED
ALAMEDA COUNTY

OCT - 6 2014

By

SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF ALAMEDA

LATASHA WINKFIELD, the Mother of Jahi McMath, a minor Petitioner, v. CHILDREN'S HOSPITAL OAKLAND, Dr. David Durand M.D. and DOES 1 through 100, inclusive Respondents	Case No. RP13-707598 ORDER APPOINTING DR. PAUL FISHER AS COURT EXPERT WITNESS

On September 30, 2014, Petitioner Latasha Winkfield ("Petitioner") petitioned this court to hold a hearing regarding the court's jurisdiction to allow Petitioner to provide new evidence that Jahi McMath, is not "brain dead" as previously found by the court. The court has scheduled a hearing for 9:00 a.m. on October 9, 2014 in Department 31.

Pursuant to Evidence Code section 730, when it appears to the court that expert evidence is or may be required by the court or by any party to the action, the court on its own motion may appoint an expert to investigate, to render a report, and to testify as an expert at the trial of the action relative to the fact or matter as to which the expert evidence may be required.

After receiving Petitioner's moving papers on October 3, 2014, the court determined that such expert evidence is required in this matter. In its prior December 23, 2013 order, the court

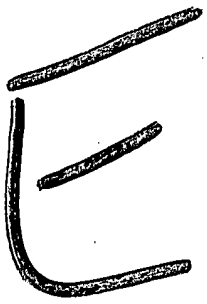
EXHIBIT D

appointed Dr. Paul Graham Fisher as the court appointed expert to conduct an independent examination of Jahi McMath pursuant to Health and Safety Code section 7181. Dr. Fisher performed an examination of Jahi McMath on December 23, 2013. Based on Dr. Fisher's previous examination of Jahi McMath as the court appointed independent expert and the court's determination that further expert medical evidence is required by the court in this matter, IT IS HEREBY ORDERED that the court appoints Dr. Paul Graham Fisher as the court appointed expert witness.

Attached to this order are: (1) Dr. Fisher's curriculum vitae, and (2) Dr. Fisher's letter dated October 6, 2014, which includes Dr. Fisher's examination and consultation finding of Jahi McMath on December 23, 2013, and a copy of the criteria for brain death in a child posited in Pediatrics 2011; 128;e720-740.

Dated: October 6, 2014

Evelio Grillo
Judge of the Superior Court



October 6, 2014

The Honorable Evilio M. Grillo
Superior Court of Alameda County California

Dear Judge Grillo:

I have reviewed the five (5) declarations provided to me your court offices on October 3, 2014, specifically declarations of D. Alan Shewmon, M.D.; Philip De Fina, Ph.D.; Charles J. Prestigiacomo, M.D.; Calixto Machado, M.D.; and Elena B. Labkovsky, Ph.D.

In order for you to review and interpret those declarations, I provide below a number of facts and thoughts, raised by those documents.

1. Criteria for brain death in a child are those posited in *Pediatrics* 2011;128:e720-740 (attached), as endorsed by the American Academy of Pediatrics, Child Neurology Society, American Academy of Neurology, and numerous other professional societies. "The American Academy of Neurology's Practice Parameters for Determining Brain Death in Adults," as referenced by Dr. Shewmon, and "AMA (American Medical Association) guidelines," as referenced by Dr. Prestigiacomo are not the relevant guidelines in the instance of Jahai McMath.

2. The diagnosis and determination of brain death requires serial neurological examinations performed in person by different attending physicians. No records of any on-site or in-person serial neurological examination of Jahai McMath, performed by a physician, have been presented to me via these declarations.

3. Videos of hand and foot movements, coincident with verbal commands heard on audio, cannot affirm or refute brain death, and are not substitutes for in-person serial neurological examinations by a physician.

4. No apnea test has been performed or reported in the declarations, as required for a determination of brain death.

5. A repeat apnea test would not cause harm to Jahai McMath.

EXHIBIT E

6. Dr. Prestigiacomo has referred to a "sleep apnea test," and that is not the correct examination in the determination of brain death.

7. A "flat" electroencephalogram (EEG), or electro-cerebral silence, is not required for the determination of brain death (see *Pediatrics* 2011;128:e720-740). The EEG performed on 9/1/14 was not performed in standard conditions, but rather at an apartment and Dr. Machado does note artifacts, which he attributes to movement. Electrical artifacts cannot be excluded as the cause of reported electrical activity, but again, electro-cerebral silence is not requisite to the determination of brain death.

8. No cerebral blood flow radionuclide brain scan has been performed or reported in the declarations, and that is the test used to determine cerebral blood flow in order to assist in the determination of brain death, not magnetic resonance angiography (MRA) (see *Pediatrics* 2011;128:e720-740).

9. MRA is not a technique used to determine cerebral blood flow.

10. Magnetic resonance imaging (MRI), as performed on 9/26/14, provides a structural picture of the brain and is not part of the determination of brain death. A picture of persistent brain tissue inside the skull does not negate the determination of brain death. Liquefaction of the brain is not requisite to the determination of brain death. There are no specific anatomic or pathologic changes noted in brain death.

11. Heart rate analysis, as presented from 9/1/14, is not part of and not relevant to the determination of brain death.

12. Menarche and menstrual cycles are not relevant to the determination of brain death.

13. A bispectal index (BIS) monitor has no role in and is not relevant to the determination of brain death.

14. I cannot determine from the declarations whether Ms. Labkovsky has completed EEG technician certification in the United States, such as that required by the American Association of Electrodiagnostic Technologists (AAET) or American Board of Registration of Electroencephalographic and Evoked Potential Technologists (ABRET). EEG Neurofeedback Certification is not considered the appropriate certification to conduct diagnostic EEGs, such as EEGs in the determination of brain death.

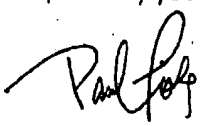
Overall, none of the current materials presented in the declarations refute my 12/23/14 examination and consultation finding (attached), or those of several prior attending physicians who completed the same exams, that Jahai McMath met all criteria for brain death. None of the declarations provide evidence that Jahai McMath is not brain dead.

I want to note on the record that I have not and will not accept any compensation for my services providing expertise in the matter of Jahai McMath, and I have no affiliations with the McMath family, UCSF Benioff Children's Hospital Oakland, or their legal counsels. I continue to extend my sympathies to the family and friends of Jahai McMath.

I hereby grant permission for the court to share this document privately or public, at your discretion. My *curriculum vitae* is attached.

I reserve the right to amend these opinions should additional materials become available for my review.

Respectfully yours,



Paul Graham Fisher, M.D.

Palo Alto, California

October 6, 2014

PEDIATRICS®
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Guidelines for the Determination of Brain Death in Infants and Children: An Update of the 1987 Task Force Recommendations

Thomas A. Nakagawa, Stephen Ashwal, Mudit Mathur, Mohan Mysore and the Society of Critical Care Medicine, Section on Critical Care and Section on Neurology of the American Academy of Pediatrics, and the Child Neurology Society

Pediatrics 2011;128;e720; originally published online August 28, 2011;
DOI: 10.1542/peds.2011-1511

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Clinical Report—Guidelines for the Determination of Brain Death in Infants and Children: An Update of the 1987 Task Force Recommendations

abstract

OBJECTIVE: To review and revise the 1987 pediatric brain death guidelines.

METHODS: Relevant literature was reviewed. Recommendations were developed using the GRADE system.

CONCLUSIONS AND RECOMMENDATIONS: (1) Determination of brain death in term newborns, infants and children is a clinical diagnosis based on the absence of neurologic function with a known irreversible cause of coma. Because of insufficient data in the literature, recommendations for preterm infants less than 37 weeks gestational age are not included in this guideline.

(2) Hypotension, hypothermia, and metabolic disturbances should be treated and corrected and medications that can interfere with the neurologic examination and apnea testing should be discontinued allowing for adequate clearance before proceeding with these evaluations.

(3) Two examinations including apnea testing with each examination separated by an observation period are required. Examinations should be performed by different attending physicians. Apnea testing may be performed by the same physician. An observation period of 24 hours for term newborns (37 weeks gestational age) to 30 days of age, and 12 hours for infants and chi (> 30 days to 18 years) is recommended. The first examination determines the child has met the accepted neurologic examination criteria for brain death. The second examination confirms brain death based on an unchanged and irreversible condition. Assessment of neurologic function following cardiopulmonary resuscitation or other severe acute brain injuries should be deferred for 24 hours or longer if there are concerns or inconsistencies in the examination.

(4) Apnea testing to support the diagnosis of brain death must be performed safely and requires documentation of an arterial $Paco_2$ 20 mm Hg above the baseline and ≥ 60 mm Hg with no respiratory effort during the testing period. If the apnea test cannot be safely completed, an ancillary study should be performed.

(5) Ancillary studies (electroencephalogram and radionuclide cerebral blood flow) are not required to establish brain death and are not a substitute for the neurologic examination. Ancillary studies may be us d to assist the clinician in making the diagnosis of brain death (i) when components of the examination or apnea testing cannot be completed safely due to the underlying medical condition of the patient; (ii) if there is uncertainty about the results of the neurologic examination; (iii) if a medication effect may be present; or (iv) to reduce the inter-examination observation period. When ancillary studies are used, a second clinical examination and apnea test should be performed and components that can be completed must remain consistent with brain death. In this instance the observation interval may be shortened and the second neurologic examination and apnea test (or all components that are able to be completed safely) can be performed at any time thereafter.

(6) Death is declared when the above criteria are fulfilled. *Pediatrics* 2011;128: e720–e740

Thomas A. Nakagawa, MD, Stephen Ashwal, MD, Mudit Mathur, MD, Mohan Mysore, MD, and THE SOCIETY OF CRITICAL CARE MEDICINE, SECTION ON CRITICAL CARE AND SECTION ON NEUROLOGY OF THE AMERICAN ACADEMY OF PEDIATRICS, AND THE CHILD NEUROLOGY SOCIETY

KEY WORDS
apnea testing, brain death, cerebral blood flow, children, electroencephalography, infants, neonates, pediatrics

ABBREVIATIONS
EEG—electroencephalogram
CBF—cerebral blood flow
CT—computed tomography
MRI—magnetic resonance imaging
ETT—endotracheal tube
CPAP—continuous positive airway pressure
ICP—intracranial pressure
ECS—electrocerebral silence

The guidance in this report does not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

www.pediatrics.org/cgi/doi/10.1542/peds.2011-1511

doi:10.1542/peds.2011-1511

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

INTRODUCTION

In 1987, guidelines for the determination of brain death in children were published by a multi-society task force.[1,2] These consensus based guidelines were developed because existing guidelines from the President's Commission failed to adequately address criteria to determine brain death in pediatric patients. They emphasized the importance of the history and clinical examination in determining the etiology of coma so that correctable or reversible conditions were eliminated. Additionally, age-related observation periods and the need for specific neurodiagnostic tests were recommended for children younger than 1 year of age. In children older than 1 year, it was recommended that the diagnosis of brain death could be made solely on a clinical basis and laboratory studies were optional. Little guidance was provided to determine brain death in neonates less than 7 days of age because of limited clinical experience and lack of sufficient data.

These guidelines generally have been accepted and used to guide clinical practice; however they have not been reviewed nor revised since originally published. Several inherent weaknesses have been recognized including: (1) limited clinical information at the time of publication; (2) uncertainty concerning the sensitivity and specificity of ancillary testing; (3) biological rationale for the use of age-based criteria; and (4) little direction as to whether, when and how the diagnosis of brain death could be made in neonates. Despite national and legal acceptance of the concept of brain death, these limitations have resulted in the lack of a standardized approach to determining brain death in children.[3–8] These issues are not unique to infants and children[10] nor limited to the United States. The American Academy of Neurology published guidelines to determine brain death in adults in 1995 which have been revised in 2010.[11,12] Additionally, guidelines to determine brain death in adults and children have been published in Canada.[13]

The Society of Critical Care Medicine (SCCM) and the Section on Critical Care and Section on Neurology of the American Academy of Pediatrics (AAP), in conjunction with the Child Neurology Society (CNS), formed a multidisciplinary committee of medical and surgical subspecialists under the auspices of the American College of Critical Care Medicine (ACCM) to review and revise the 1987 guidelines. Its purpose was to review the neonatal and pediatric literature from 1987, including any prior relevant literature, and update recommendations regarding appropriate examination criteria and use of ancillary testing to diagnose brain death in neonates, infants and children. The committee was also charged with developing a checklist to provide guidance and standardization to document brain death. Uniformity in the determination of brain death should allow physicians to pronounce brain death in pediatric patients in a more precise and orderly manner and ensure that all components of the examination are performed and appropriately documented.

Tables 1–3 of this publication contain the committee's updated recommendations, the GRADE classification system, and clinical and neurologic examination criteria for brain death. Appendices 1–7 provide additional information concerning the diagnosis of brain death in children. Appendix 1 (check list) and Appendix 2 (pharmacological data for the time interval to testing after medication discontinuation) provide additional resources to aid the clinician in diagnosing brain death. Appendix 3 summarizes data regarding apnea testing. Appendices 4–6 provide data on the diagnostic yield of ancillary testing, specifically electroencephalography (EEG), and radionuclide cerebral blood flow (CBF) studies. Appendix 7 compares the 1987 guideline's criteria to the revised recommendations. Appendix 8 provides an algorithm for the determination of brain death in infants and children.

This update affirms the definition of death as stated in the 1987 pediatric guidelines. This definition had been established by multiple organizations including the American Medical Association, the American Bar Association, the National Conference of Commissioners on Uniform State Laws, the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research and the American Academy of Neurology as follows: "An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brainstem, is dead. A determination of death must be made in accordance with accepted medical standards."[1]

METHODS

A multidisciplinary committee composed of physicians and nurses with expertise in pediatrics, pediatric critical care, neonatology, pediatric neurology and neurosurgery, nuclear medicine, and neuroradiology was formed by the SCCM and the AAP to update the guidelines for the diagnosis of pediatric brain death. The committee was divided into three working groups, each charged with reviewing the literature on brain death in neonates, infants and children for the following specific areas: (1) examination criteria and observation periods; (2) ancillary testing; and (3) declaration of death by medical personnel including legal and ethical implications.

A Medline search of relevant literature published from January 1987 to June

TABLE 1 Summary Recommendations for the Diagnosis of Brain Death in Neonates, Infants, and Children

Recommendation	Evidence Score	Recommendation Score
1. **Determination of brain death** in neonates, infants and children relies on a clinical diagnosis that is based on the absence of neurologic function with a known irreversible cause of coma. Coma and apnea must coexist to diagnose brain death. This diagnosis should be made by physicians who have evaluated the history and completed the neurologic examinations.	High	Strong
2. Prerequisites for initiating a brain death evaluation		
a. Hypotension, hypothermia, and metabolic disturbances that could affect the neurological examination must be corrected prior to examination for brain death.	High	Strong
b. Sedatives, analgesics, neuromuscular blockers, and anticonvulsant agents should be discontinued for a reasonable time period based on elimination half-life of the pharmacologic agent to ensure they do not affect the neurologic examination. Knowledge of the total amount of each agent (mg/kg) administered since hospital admission may provide useful information concerning the risk of continued medication effects. Blood or plasma levels to confirm high or supratherapeutic levels of anticonvulsants with sedative effects that are not present should be obtained (if available) and repeated as needed or until the levels are in the low to mid therapeutic range.	Moderate	Strong
c. The diagnosis of brain death based on neurologic examination alone should not be made if supratherapeutic or high therapeutic levels of sedative agents are present. When levels are in the low or in the mid-therapeutic range, medication effects sufficient to affect the results of the neurologic examination are unlikely. If uncertainty remains, an ancillary study should be performed.	Moderate	Strong
d. Assessment of neurologic function may be unreliable immediately following cardiopulmonary resuscitation or other severe acute brain injuries and evaluation for brain death should be deferred for 24 to 48 hours or longer if there are concerns or inconsistencies in the examination.	Moderate	Strong
3. Number of examinations, examiners and observation periods		
a. Two examinations including apnea testing with each examination separated by an observation period are required.	Moderate	Strong
b. The examinations should be performed by different attending physicians involved in the care of the child. The apnea test may be performed by the same physician, preferably the attending physician who is managing ventilator care of the child.	Low	Strong
c. Recommended observation periods:		
(1) 24 hours for neonates (37 weeks gestation to term infants 30 days of age)	Moderate	Strong
(2) 12 hours for infants and children (> 30 days to 18 years).		
d. The first examination determines the child has met neurologic examination criteria for brain death. The second examination, performed by a different attending physician, confirms that the child has fulfilled criteria for brain death.	Moderate	Strong
e. Assessment of neurologic function may be unreliable immediately following cardiopulmonary resuscitation or other severe acute brain injuries and evaluation for brain death should be deferred for 24 to 48 hours or longer if there are concerns or inconsistencies in the examination.	Moderate	Strong
4. Apnea testing		
a. Apnea testing must be performed safely and requires documentation of an arterial $Paco_2$ 20 mm Hg above the baseline $Paco_2$ and ≥ 60 mm Hg with no respiratory effort during the testing period to support the diagnosis of brain death. Some infants and children with chronic respiratory disease or insufficiency may only be responsive to supranormal $Paco_2$ levels. In this instance, the $Paco_2$ level should increase to ≥ 20 mm Hg above the baseline $Paco_2$ level.	Moderate	Strong
b. If the apnea test cannot be performed due to a medical contraindication or cannot be completed because of hemodynamic instability, desaturation to < 85%, or an inability to reach a $Paco_2$ of 60 mm Hg or greater, an ancillary study should be performed.	Moderate	Strong
5. Ancillary studies		
a. Ancillary studies (EEG and radionuclide CBF) are not required to establish brain death unless the clinical examination or apnea test cannot be completed	Moderate	Strong
b. Ancillary studies are not a substitute for the neurologic examination.	Moderate	Strong
c. For all age groups, ancillary studies can be used to assist the clinician in making the diagnosis of brain death to reduce the observation period or when (i) components of the examination or apnea testing cannot be completed safely due to the underlying medical condition of the patient; (ii) if there is uncertainty about the results of the neurologic examination; or (iii) if a medication effect may interfere with evaluation of the patient. If the ancillary study supports the diagnosis, the second examination and apnea testing can then be performed. When an ancillary study is used to reduce the observation period, all aspects of the examination and apnea testing should be completed and documented.	Moderate	Strong
d. When an ancillary study is used because there are inherent examination limitations (ie, i to iii), then components of the examination done initially should be completed and documented.	High	Strong
e. If the ancillary study is equivocal or if there is concern about the validity of the ancillary study, the patient cannot be pronounced dead. The patient should continue to be observed until brain death can be declared on clinical examination criteria and apnea testing, or a follow-up ancillary study can be performed to assist with the determination of brain death. A waiting period of 24 hours is recommended before further clinical reevaluation or repeat ancillary study is performed. Supportive patient care should continue during this time period.	Moderate	Strong
6. Declaration of death		
a. Death is declared after confirmation and completion of the second clinical examination and apnea test.	High	Strong
b. When ancillary studies are used, documentation of components from the second clinical examination that can be completed must remain consistent with brain death. All aspects of the clinical examination, including the apnea test, or ancillary studies must be appropriately documented.	High	Strong
c. The clinical examination should be carried out by experienced clinicians who are familiar with infants and children, and have specific training in neurocritical care.	High	Strong

The "evaluation score" is based on the strength of the evidence available at the time of publication.

The "recommendation score" is the strength of the recommendations based on available evidence at the time of publication. Scoring guidelines are listed in Table 2.

TABLE 2 Grading of Recommendations Assessment, Development and Evaluation (GRADE) System[14–16]

1. Classification of evidence	
Grade	
A. High	Further research is very unlikely to change our confidence in the estimate of effect
B. Moderate	Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate
C. Low	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate
D. Very low	Any estimate of effect is very uncertain
2. Recommendations: The strength of a recommendation reflects the extent to which we can be confident that desirable effects of an intervention outweigh undesirable effects.	
Strong	When the desirable effects of an intervention clearly outweigh the undesirable effects, or clearly do not. (a) For patients—most people in your situation would want the recommended course of action and only a small proportion would not (b) For clinicians—most patients should receive the recommended course of action (c) For policy makers—the recommendation can be adopted as a policy in most situations
Weak	Evidence suggests that desirable and undesirable effects are closely balanced or the quality of evidence is low. (a) For patients—most people in your situation would want the recommended course of action, but many would not (b) For clinicians—you should recognize that different choices will be appropriate for different patients and you must help each patient to arrive at a management decision consistent with his or her values and preferences. (c) For policy makers—policy making will require substantial debate and involvement of many stakeholders
No specific recommendations	The advantages and disadvantages of the recommendations are equivalent or where there is insufficient evidence on which to formulate a recommendation

2008 was conducted. Key words included: brain death, neurologic death, neonatal, pediatric, cerebral blood flow, electroencephalography, apnea test, and irreversible coma with the subheading, "children." Additional articles cited in the post 1987 literature that were published prior to 1987 were also reviewed if they contained data relevant to this guideline. Abstracts and articles were independently reviewed and summarized by at least two individuals on each committee. Data were summarized into five categories: clinical examination, apnea testing, observation periods, ancillary tests, and other considerations.

Methodological issues regarding analysis of evidence warrant further discussion as they directly affected the decision of how information and recommendations about brain death are presented. No randomized control trials examining different strategies regarding the diagnosis of brain death exist. Standard evidence-based approaches for guidelines used by many organizations attempting to link the "strength of the evidence" to the "strength of the recommendations" therefore cannot be used in this instance. There is, however, considerable experiential consensus within observational studies in the pediatric population. Grading of Recommendations Assessment, Development and Evaluation (GRADE), a recently developed standardized methodological consensus-based approach, allows panels to evaluate the evidence and opinions and make recommendations.[14–17] GRADE uses 5 domains to judge the balance between the desirable and undesirable effect of an intervention. *Strong recommendations* are made when there is confidence that the desirable effects of adherence to a recommendation outweigh the undesirable effects. *Weak recommendations* indicate that the desirable effects of adherence to a recommendation probably outweigh the undesirable effects, but the panel is less confident. *No specific recommendations* are made when the advantages and disadvantages of alternative courses of action are equivalent or where there is insufficient evidence on which to formulate a recommendation.[15,18] Table 2 outlines the GRADE methodology used in formulating recommendations for this guideline. Each committee member assigned a GRADE score for (i) the strength of evidence linked to a specific recommendation and (ii) indicated (*a*) "yes," (*b*) "no" or (*c*) "uncertain" for each of the six recommendations listed at the end of this report. By a priori consensus, the committee decided that a "strong" recommendation could only be made if greater than 80% of the committee members voted "yes"

TABLE 3 Neurologic Examination Components to Assess for Brain Death in Neonates, Infants and Children* Including Apnea Testing

Reversible conditions or conditions that can interfere with the neurologic examination must be excluded prior to brain death testing.
See text for discussion

1. **Coma. The patient must exhibit complete loss of consciousness, vocalization and volitional activity.**
   - Patients must lack all evidence of responsiveness. Eye opening or eye movement to noxious stimuli is absent.
   - Noxious stimuli should not produce a motor response other than spinally mediated reflexes. The clinical differentiation of spinal responses from retained motor responses associated with brain activity requires expertise.
2. **Loss of all brain stem reflexes including:**

Midposition or fully dilated pupils which do not respond to light.
Absence of pupillary response to a bright light is documented in both eyes. Usually the pupils are fixed in a midsize or dilated position (4–9 mm). When uncertainty exists, a magnifying glass should be used.

Absence of movement of bulbar musculature including facial and oropharyngeal muscles.
Deep pressure on the condyles at the level of the temporomandibular joints and deep pressure at the supraorbital ridge should produce no grimacing or facial muscle movement.

Absent gag, cough, sucking, and rooting reflex
The pharyngeal or gag reflex is tested after stimulation of the posterior pharynx with a tongue blade or suction device. The tracheal reflex is most reliably tested by examining the cough response to tracheal suctioning. The catheter should be inserted into the trachea and advanced to the level of the carina followed by 1 or 2 suctioning passes.

Absent corneal reflexes
Absent corneal reflex is demonstrated by touching the cornea with a piece of tissue paper, a cotton swab, or squirts of water. No eyelid movement should be seen. Care should be taken not to damage the cornea during testing.

Absent oculovestibular reflexes
The oculovestibular reflex is tested by irrigating each ear with ice water (caloric testing) after the patency of the external auditory canal is confirmed. The head is elevated to 30 degrees. Each external auditory canal is irrigated (1 ear at a time) with ~10 to 50 mL of ice water. Movement of the eyes should be absent during 1 minute of observation. Both sides are tested, with an interval of several minutes.

3. **Apnea. The patient must have the complete absence of documented respiratory effort (if feasible) by formal apnea testing demonstrating a $Paco_2$ ≥ 60 mm Hg and ≥ 20 mm Hg increase above baseline.**
   - Normalization of the pH and $Paco_2$, measured by arterial blood gas analysis, maintenance of core temperature > 35°C, normalization of blood pressure appropriate for the age of the child, and correcting for factors that could affect respiratory effort are a prerequisite to testing.
   - The patient should be preoxygenated using 100% oxygen for 5–10 minutes prior to initiating this test.
   - Intermittent mandatory mechanical ventilation should be discontinued once the patient is well oxygenated and a normal $Paco_2$ has been achieved.
   - The patient's heart rate, blood pressure, and oxygen saturation should be continuously monitored while observing for spontaneous respiratory effort throughout the entire procedure.
   - Follow up blood gases should be obtained to monitor the rise in $Paco_2$ while the patient remains disconnected from mechanical ventilation.
   - If no respiratory effort is observed from the initiation of the apnea test to the time the measured $Paco_2$ ≥ 60 mm Hg and ≥ 20 mm Hg above the baseline level, the apnea test is consistent with brain death.
   - The patient should be placed back on mechanical ventilator support and medical management should continue until the second neurologic examination and apnea test confirming brain death is completed.
   - If oxygen saturations fall below 85%, hemodynamic instability limits completion of apnea testing, or a $Paco_2$ level of ≥ 60 mm Hg cannot be achieved, the infant or child should be placed back on ventilator support with appropriate treatment to restore normal oxygen saturations, normocarbia, and hemodynamic parameters. Another attempt to test for apnea may be performed at a later time or an ancillary study may be pursued to assist with determination of brain death.
   - Evidence of any respiratory effort is inconsistent with brain death and the apnea test should be terminated.
4. **Flaccid tone and absence of spontaneous or induced movements, excluding spinal cord events such as reflex withdrawal or spinal myoclonus.**
   - The patient's extremities should be examined to evaluate tone by passive range of motion assuming that there are no limitations to performing such an examination (eg, previous trauma, etc) and the patient observed for any spontaneous or induced movements.
   - If abnormal movements are present, clinical assessment to determine whether or not these are spinal cord reflexes should be done.

*Criteria adapted from 2010 American Academy of Neurology criteria for brain death determination in adults (Wijdicks et al, 2010).

for a recommendation and that a "weak" recommendation was made if greater than 60% but less than 80% voted "yes." "No recommendation" was made if less than 60% of the committee voted "yes" for a specific recommendation. Table 1 summarizes GRADE recommendations and evidence scores.

The committee believes these revised diagnostic guidelines, summarized in Table 1 and a standardized checklist form (Appendix 1), will assist physicians in determining and documenting brain death in children. This should ensure broader acceptance and utilization of such uniform criteria. The committee recognizes that medical judgment of involved pediatric specialists will direct the appropriate course for the medical evaluation and diagnosis of brain death. The committee also recognizes that no national brain death law exists. State statutes and policy may restrict determination of brain death in certain circumstances. Physicians should become familiar with laws and policies in their respective institution. The committee also recognizes that variability exists for the age designation of pediatric trauma patients. In some states, the age of the pediatric trauma patient is defined as less than 14 years of age.

Trauma and intensive care practitioners are encouraged to follow state/local regulations governing the specified age of pediatric trauma patients. The committee believes these guidelines to be an important step in protecting the health and safety of all infants and children. These revised guidelines and accompanying checklist are intended to provide a framework to promote standardization of the neurologic examination and use of ancillary studies based on the evidence available to the committee at the time of publication.

TERM NEWBORNS (37 WEEKS GESTATIONAL AGE) TO CHILDREN 18 YEARS OF AGE

Definition of Brain Death and Components of the Clinical Examination (*Recommendation 1, Table 1 and Table 3*)

Brain death is a clinical diagnosis based on the absence of neurologic function with a known diagnosis that has resulted in irreversible coma. Coma and apnea must coexist to diagnose brain death. A complete neurologic examination that includes the elements outlined in Table 3 is mandatory to determine brain death with all components appropriately documented.

Prerequisites for Initiating a Clinical Brain Death Evaluation (*Recommendations 2a–d, Table 1*)

Determination of brain death by neurologic examination should be performed in the setting of normal age-appropriate physiologic parameters. Factors potentially influencing the neurologic examination that must be corrected before examination and apnea testing include: (1) shock or persistent hypotension based on normal systolic or mean arterial blood pressure values for the patient's age. Systolic blood pressure or MAP should be in an acceptable range (systolic BP not less than 2 standard deviations below age appropriate norm) based on age; (2) hypothermia; (3) severe metabolic disturbances capable of causing a potentially reversible coma including electrolyte/glucose abnormalities; (4) recent administration of neuromuscular blocking agents; and (5) drug intoxications including but not limited to barbiturates, opioids, sedative and anesthetic agents, antiepileptic agents, and alcohols. Placement of an indwelling arterial catheter is recommended to ensure that blood pressure remains within a normal range during the process of diagnosing brain death and to accurately measure $Paco_2$ levels during apnea testing.

Hypothermia is used with increasing frequency as an adjunctive therapy for individuals with acute brain injury.[19–22] Hypothermia has also been used following cardiac arrest to protect the brain because it reduces cerebral metabolic activity.[23–26] The clinician caring for critically ill infants and children should be aware of the potential impact of therapeutic modalities such as hypothermia on the diagnosis of brain death. Hypothermia is known to depress central nervous system function[27–29] and may lead to a false diagnosis of brain death. Hypothermia may alter metabolism and clearance of medications that can interfere with brain death testing. Efforts to adequately rewarm before performing any neurologic examination and maintain temperature during the observation period are essential. The 1987 guidelines stated that the patient must not be significantly hypothermic however no definition was provided.[1] It is reasonable that the core body temperature at the time of brain death examination be as close to normal to reproduce normal physiologic conditions. A core body temperature of >35°C (95°F) should be achieved and maintained during examination and testing to determine death. This temperature is consistent with current adult guidelines and is relatively easy to achieve and maintain in children.[11,13]

Severe metabolic disturbances can cause reversible coma and interfere with the clinical evaluation to determine brain death. Reversible conditions such as severe electrolyte imbalances, hyper or hyponatremia, hyper or hypoglycemia, severe pH disturbances, severe hepatic or renal dysfunction or inborn errors of metabolism may cause coma in a neonate or child.[28,29] These conditions should be identified and treated before evaluation for brain death, especially in situations where the clinical history does not provide a reasonable explanation for the neurologic status of the child.

Drug intoxications including barbiturates, opioids, sedatives, intravenous and inhalation anesthetics, antiepileptic agents, and alcohols can cause severe central nervous system depression and may alter the clinical examination to the point where they can mimic brain death.[28,29] Testing for these drugs should be performed if there is concern regarding recent ingestion or administration. When available, specific serum levels of medications with sedative properties or side effects should be obtained and documented to be in a low to mid therapeutic range before neurologic examination for brain death testing. Longer acting or continuous infusion of sedative agents can also interfere with the neurologic evaluation. These medications should be discontinued. Adequate clearance (based on the age of the child, presence of organ dysfunction, total amount of medication administered, elimination half-life of the drug and any active metabolites) should be allowed before the neurologic examination. In some instances this may require waiting several half-

lives and rechecking serum levels of the medication before conducting the brain death examination. If neuromuscular blocking agents have been used, they should be stopped and adequate clearance of these agents confirmed by use of a nerve stimulator with documentation of neuromuscular junction activity and twitch response. Other unusual causes of coma such as neurotoxins, and chemical exposure (ie, organophosphates, and carbamates) should be considered in rare cases where an etiology for coma has not been established. Recommendations of time intervals before brain death evaluation for many of the commonly used medications administered to critically ill neonates and children are listed in Appendix 2.

Clinical criteria for determining brain death may not be present on admission and may evolve during hospitalization. Assessment of neurologic function may be unreliable immediately following resuscitation after cardiopulmonary arrest[30–33] or other acute brain injuries and serial neurologic examinations are necessary to establish or refute the diagnosis of brain death. Additionally, initial stabilization may take several hours during which time correcting metabolic disturbances and identifying and treating reversible conditions that may imitate brain death can be accomplished. It is reasonable to defer neurologic examination to determine brain death for 24 hours or longer if dictated by clinical judgment of the treating physician in such circumstances. If there are concerns about the validity of the examination (eg, flaccid tone or absent movements in a patient with high spinal cord injury or severe neuromuscular disease) or if specific examination components cannot be performed due to medical contraindications (eg, apnea testing in patients with significant lung injury, hemodynamic instability, or high spinal cord injury), or if examination findings are inconsistent, continued observation and postponing further neurologic examinations until these issues are resolved is warranted to avoid improperly diagnosing brain death. An ancillary study can be pursued to assist with the diagnosis of brain death in situations where certain examination components cannot be completed.

Neuroimaging with either computed tomography (CT) or magnetic resonance imaging (MRI) should demonstrate evidence of an acute central nervous system injury consistent with the profound loss of brain function. It is recognized that early after acute brain injury, imaging findings may not demonstrate significant injury. In such situations, repeat studies are helpful in documenting that an acute severe brain injury has occurred. CT and MRI are not considered ancillary studies and should not be relied on to make the determination of brain death.

Number of Examinations, Examiners and Observation Periods (*Recommendations 3a–e, Table 1*)

Number of Examinations and Examiners

The 1987 guidelines recommended observation periods between brain death examinations based on age and the results of neurodiagnostic testing.[1] Two examinations and EEG's separated by at least 48 hours were recommended for infants 7 days to 2 months. Two examinations and EEG's separated by at least 24 hours were recommended for children 2 months to 1 year. A repeat EEG was not necessary if a cerebral radionuclide scan or cerebral angiography demonstrated no flow or visualization of the cerebral arteries. For children older than 1 year, an observation period of 12 hours was recommended and ancillary testing was not required when an irreversible cause existed. The observation period in this age group could be decreased if there was documentation of electrocerebral silence (ECS) or absent cerebral blood flow (CBF).[1] The general consensus was the younger the child, the longer the waiting period unless ancillary studies supported the clinical diagnosis of brain death and if so, the observation period could be shortened.

The current committee supports the 1987 guideline recommending performance of two examinations separated by an observation period. The committee recommends that these examinations be performed by different attending physicians involved in the care of the child. Children being evaluated for brain death may be cared for and evaluated by multiple medical and surgical specialists. The committee recommends that the best interests of the child and family are served if at least two different attending physicians participate in diagnosing brain death to ensure that (i) the diagnosis is based on currently established criteria, (ii) there are no conflicts of interest in establishing the diagnosis and (iii) there is consensus by at least two physicians involved in the care of the child that brain death criteria are met. The committee also believes that because the apnea test is an objective test, it may be performed by the same physician, preferably the attending physician who is managing ventilator care of the child.

Duration of Observation Periods

A literature review of 171 children diagnosed as brain dead found that 47% had ventilator support withdrawn an average of 1.7 days after the diagnosis of brain death was made.[34] Seventy-nine children (46%) in whom support was continued after declaration of brain death suffered a cardiac arrest an average of 22.7 days later. The re-

maining children died by an unknown mechanism (5%), or made an incomplete (1%) or complete recovery (0.5%). Review of the children who survived indicates they did not fulfill brain death criteria by accepted medical standards. The age range of the children in this study included preterm and term neonates and older infants and children up to 18 years of age. These data and the reports of more recent studies[35,36] suggest that there is likely no biological justification for using different durations of observation to diagnose brain death in infants greater than one month of age. In fact, there are no reports of children recovering neurologic function after meeting adult brain death criteria based on neurologic examination findings.[37] Although some authors have reported apparent reversibility of brain death, further review of these cases reveals these children would not have fulfilled brain death criteria by currently accepted US medical standards.[38]

Based on the above data, currently available literature and clinical experience, the committee recommends the observation period between examinations should be 24 hours for neonates (37 weeks up to 30 days), and 12 hours for infants and children (> 30 days to 18 years). The first examination determines the child has met neurologic examination criteria for brain death. The second examination confirms brain death based on an unchanged and irreversible condition. Timing of the first clinical brain death examination, reduction of the observation period, and use of ancillary studies are discussed in separate sections of this guideline.

Apnea Testing (*Recommendations 4a,b, Table 1*)

Apnea testing should be performed with each neurologic examination to determine brain death in all patients unless a medical contraindication exists. Contraindications may include conditions that invalidate the apnea test (such as high cervical spine injury) or raise safety concerns for the patient (high oxygen requirement or ventilator settings). If apnea testing cannot be completed safely, an ancillary study should be performed to assist with the determination of brain death.

The normal physiologic threshold for apnea (minimum carbon dioxide tension at which respiration begins) in children has been assumed to be the same as in adults with reports demonstrating that $Paco_2$ levels in the normal range (24–38 mm Hg) may be adequate to stimulate ventilatory effort in children with residual brainstem function.[39] Although expert opinion has suggested a range of $Paco_2$ levels from 44 to 60 mm Hg for apnea testing in adults, the general consensus in infants and children has been to use 60 mm Hg as a threshold.[40–42] Appendix 3 summarizes data from 4 studies (3 being prospective) on 106 apnea tests in 76 children 2 months old to 17 years with suspected brain death.[39–42] 73 of 76 children had no spontaneous ventilatory effort. In 3 of these studies mean $Paco_2$ values were 59.5 ± 10.2, 68.1 ± 17.7, and 63.9 ± 21.5 mm Hg; in the fourth study, mean $Paco_2$ values were not reported, only the range (ie, 60–116 mm Hg).[39–42] Three children exhibited spontaneous respiratory effort with measured $Paco_2$ levels < 40 mm Hg.[39,42] Serial measurements of $Paco_2$ were done in most studies and 15 minutes was the usual end point of testing although patients may have had apnea for longer periods. The maximum rate of $Paco_2$ increase usually occurred within 5 minutes. Sixty five children had no ventilatory effort during the apnea test. After completion of apnea testing, support was withdrawn in all of these patients. Patient outcome was not reported for one study although these 9 children all had absent brainstem reflexes for a period of > 72 hours.[41] In one study 4/9 patients had phenobarbital levels that were interpreted as not affecting the results of apnea testing.[41]

There are three case reports discussing irregular breaths or minimal respiratory effort with a Pco_2 > 60 mm Hg in children who otherwise met criteria for brain death.[43–45] Two children died, one after meeting all criteria for brain death including a second apnea test. The remaining child survived and was supported in a chronic care facility with a tracheostomy, chronic mechanical ventilation and a gastrostomy tube. One other report describes a 3-month-old who met all criteria for brain death including 2 apnea tests with serial Pco_2's of 69.3 mm Hg and 62.1 mm Hg respectively. This infant was declared dead on hospital day 5. This infant developed irregular spontaneous respirations at a rate of two to three breaths per minute 38 days later which continued while receiving mechanical ventilator support until death on day 71.[46] Review of this case and others remind us to be cautious in applying brain death criteria in young infants. However, these cases should not be considered to represent reversible deficits or failure of current brain death criteria.[47]

Technique for Apnea Testing

Apnea testing in term newborns, infants, and children is conducted similar to adults. Normalization of the pH and $Paco_2$, measured by arterial blood gas analysis, maintenance of core temperature > 35°C, normalization of blood pressure appropriate for the age of the child, and correcting for factors that could affect respiratory effort are a prerequisite to testing. The patient must be preoxygenated using 100% oxygen for 5–10 minutes before initiating this test. Intermittent manda-

tory mechanical ventilation should be discontinued once the patient is well oxygenated and a normal $Paco_2$ has been achieved. The patient can then be changed to a T piece attached to the endotracheal tube (ETT), or a self-inflating bag valve system such as a Mapleson circuit connected to the ETT. Tracheal insufflation of oxygen using a catheter inserted through the ETT has also been used, however caution is warranted to ensure adequate gas excursion and to prevent barotrauma. High gas flow rates with tracheal insufflation may also promote CO_2 washout preventing adequate $Paco_2$ rise during apnea testing. Continuous positive airway pressure (CPAP) ventilation has been used during apnea testing. Many current ventilators automatically change from a CPAP mode to mandatory ventilation and deliver a breath when apnea is detected. It is also important to note that spontaneous ventilation has been falsely reported to occur while patients were maintained on CPAP despite having the trigger sensitivity of the mechanical ventilator reduced to minimum levels.[48] Physician(s) performing apnea testing should continuously monitor the patient's heart rate, blood pressure, and oxygen saturation while observing for spontaneous respiratory effort throughout the entire procedure. $Paco_2$, measured by blood gas analysis, should be allowed to rise to $\geq$ 20 mm Hg above the baseline $Paco_2$ level and $\geq$ 60 mm Hg. If no respiratory effort is observed from the initiation of the apnea test to the time the measured $Paco_2 \geq$ 60 mm Hg and $\geq$ 20 mm Hg above the baseline level, the apnea test is consistent with brain death. The patient should be placed back on mechanical ventilator support and medical management should continue until the second neurologic examination and apnea test confirming brain death is completed. If oxygen saturations fall below 85%, hemodynamic instability limits completion of apnea testing, or a $Paco_2$ level of $\geq$ 60 mm Hg cannot be achieved, the infant or child should be placed back on ventilator support with appropriate treatment to restore normal oxygen saturations, normocarbia, and hemodynamic parameters. In this instance, another attempt to test for apnea may be performed at a later time or an ancillary study may be pursued to assist with determination of brain death. Evidence of any respiratory effort that is inconsistent with brain death and the apnea test should be terminated and the patient placed back on ventilatory support.

Ancillary Studies (*Recommendations 5a–e, Table 1*)

The committee recommends that ancillary studies are not required to establish brain death and should not be viewed as a substitute for the neurologic examination. Ancillary studies may be used to assist the clinician in making the diagnosis of brain death (i) when components of the examination or apnea testing cannot be completed safely due to the underlying medical condition of the patient; (ii) if there is uncertainty about the results of the neurologic examination; (iii) if a medication effect may be present; or (iv) to reduce the inter-examination observation period. The term "ancillary study" is preferred to "confirmatory study" since these tests assist the clinician in making the clinical diagnosis of brain death. Ancillary studies may also be helpful for social reasons allowing family members to better comprehend the diagnosis of brain death.

Four-vessel cerebral angiography is the gold standard for determining absence of CBF. This test can be difficult to perform in infants and small children, may not be readily available at all institutions, and requires moving the patient to the angiography suite potentially increasing risk of exacerbating hemodynamic and respiratory instability during transport of a critically ill child outside of the intensive care unit. Electroencephalographic documentation of electrocerebral silence (ECS) and use of radionuclide CBF determinations to document the absence of CBF remain the most widely used methods to support the clinical diagnosis of brain death in infants and children. Radionuclide CBF testing must be performed in accordance with guidelines established by the Society of Nuclear Medicine and the American College of Radiology.[49,50] EEG testing must be performed in accordance with standards established by the American Electroencephalographic Society.[51] Interpretation of ancillary studies requires the expertise of appropriately trained and qualified individuals who understand the limitations of these studies to avoid any potential misinterpretation.

Similar to the neurologic examination, hemodynamic and temperature parameters should be normalized before obtaining EEG or CBF studies. Pharmacologic agents that could affect the results of testing should be discontinued (Appendix 2) and levels determined as clinically indicated. Low to mid therapeutic levels of barbiturates should not preclude the use of EEG testing.[48] Evidence suggests that radionuclide CBF study can be used in patients with high dose barbiturate therapy to demonstrate absence of CBF.[52,53]

Diagnostic Yield of the EEG in Suspected Brain Dead Children

Appendix 4 summarizes EEG data from 12 studies in 485 suspected brain dead children in all age groups.[34,54–65] The data show that 76% of all children who were evaluated with EEG for brain death on the first EEG had ECS. Multiple EEGs increased the yield to 89%. For those children who had ECS on their

first EEG, 64/66 patients (97%) had ECS on a follow-up EEG. The first exception was a neonate who had a phenobarbital level of 30 μg/mL when the first EEG was performed.[65] The second exception was a 5 year old head trauma patient who was receiving pentobarbital and pancuronium at the time of the initial EEG.[62] This patient also had a CBF study performed demonstrating flow. In retrospect, these two patients would not have met currently accepted standards for brain death based on pharmacologic interference with EEG testing. Additionally, of those patients with EEG activity on the first EEG, 55% had a subsequent EEG that showed ECS. The remaining 45% either had persistent EEG activity or additional EEGs were not performed. All died (spontaneously or by withdrawal of support). Only one patient survived from this entire group of 485 patients, a neonate with an elevated phenobarbital level whose first EEG showed photic response and survived severely neurologically impaired.

Diagnostic Yield of Radionuclide CBF Studies in Suspected Brain Dead Children

Appendix 5 summarizes CBF data from 12 studies in 681 suspected brain dead children in all age groups.[36,54,55,57,59,60,63,64–68] Different but well standardized and conventional radionuclide cerebral angiography methods were used. Absent CBF was found in 86% of children who were clinically brain dead and the yield did not significantly change if more than one CBF study was done (89%). Appendix 5 also summarizes follow-up data on children whose subsequent CBF study showed no flow. 24/26 patients (92%) had no flow on follow-up CBF studies when the first study showed absent flow. The two exceptions where flow developed later were newborns. The first newborn had minimal flow on the second study and ventilator support was discontinued. The other newborn developed flow on the second study and had some spontaneous respirations and activity. A phenobarbital level two days after the second CBF study with minimal flow was 8 μg/mL.[85]

In those patients with preserved CBF on the first CBF study, 26% (9/34) had a second CBF study that showed no flow. The remaining 74% either had preserved flow or no further CBF studies were done and all but one patient died (either spontaneously or by withdrawal of support). Only one patient survived with severe neurologic impairment from this entire group of patients—the same neonate as noted previously with no CBF on the first study but presence of CBF on the second study.

Diagnostic Yield of the Initial EEG Versus Radionuclide CBF Studies in Brain Dead Children

Appendix 6 summarizes the comparative diagnostic yield of EEG versus CBF determinations in children who had both studies done as part of the initial brain death evaluation. Data from the 12 studies cited in Appendices 4 and 5 were stratified by 3 age groups: (i) all children ($n = 149$); (ii) newborns (< 1 month of age, $n = 30$); and (iii) children age > 1 month to 18 years ($n = 119$).[36,54–56,58–68]

The data in Appendices 4 and 5 show that the yield from the initial CBF studies was higher (86%) than from the initial EEG (76%) but no differences were present for any CBF study (89%) vs any EEG study (89%). In contrast the data in Appendix 6 for all children show that when both studies are initially performed, the diagnostic yield is the same (70% had ECS; and 70% showed absent CBF). The diagnostic yield for children greater than 1 month of age was similar for both tests (EEG with ECS, 78%; no CBF, 71%). For newborns, EEG with ECS was less sensitive (40%) than absence of CBF (63%) when confirming the diagnosis of brain death but even in the CBF group the yield was low.

In summary, both of these ancillary studies remain accepted tests to assist with determination of brain death in infants and children. The data suggest that EEG and CBF studies are of similar confirmatory value. Radionuclide CBF techniques are increasingly being used in many institutions replacing EEG as an ancillary study to assist with the determination of brain death in infants and children.[5,69] Other ancillary studies such as the Transcranial Doppler study and newer tests such as CT angiography, CT perfusion using arterial spin labeling, nasopharyngeal somatosensory evoked potential studies, MRI-MR angiography, and perfusion MRI imaging have not been studied sufficiently nor validated in infants and children and cannot be recommended as ancillary studies to assist with the determination of brain death in children at this time.

Repeating Ancillary Studies

If the EEG study shows electrical activity or the CBF study shows evidence of flow or cellular uptake, the patient cannot be pronounced dead at that time. The patient should continue to be observed and medically treated until brain death can be declared solely on clinical examination criteria and apnea testing based on recommended observation periods, or a follow-up ancillary study can be performed to assist and is consistent with the determination of brain death, or withdrawal of life-sustaining medical therapies is made irrespective of meeting criteria for brain death. A waiting period of 24 hours is recommended before further ancillary testing, using a radionuclide CBF study, is performed allowing adequate clearance of Tc-99m.[49,50] While no evidence exists for a recommended

waiting period between EEG studies, a waiting period of 24 hours is reasonable and recommended before repeating this ancillary study.

Shortening the Observation Period

If an ancillary study, used in conjunction with the first neurologic examination, supports the diagnosis of brain death, the inter-examination observation interval can be shortened and the second neurologic examination and apnea test (or all components that can be completed safely) can be performed and documented at any time thereafter for children of all ages.

SPECIAL CONSIDERATIONS FOR TERM NEWBORNS (37 WEEKS GESTATION) TO 30 DAYS OF AGE (*RECOMMENDATIONS 1–5, TABLE 1*)

Preterm and term neonates younger than 7 days of age were excluded from the 1987 Task Force guidelines. The ability to diagnose brain death in newborns is still viewed with some uncertainty primarily due to the small number of brain-dead neonates reported in the literature[54,65,70] and whether there are intrinsic biological differences in neonatal brain metabolism, blood flow and response to injury. The newborn has patent sutures and an open fontanelle resulting in less dramatic increases in intracranial pressure (ICP) after acute brain injury when compared with older patients. The cascade of events associated with increased ICP and reduced cerebral perfusion ultimately leading to herniation are less likely to occur in the neonate.

Clinical Examination

Limited data are available regarding the clinical examination for brain death in preterm and term infants.[70] It has been recognized that examination of the preterm infant less than 37 weeks gestation to determine if they meet brain death criteria may be difficult because of the possibility that some of the brainstem reflexes may not be completely developed and that it is also difficult to assess the level of consciousness in a critically ill, sedated and intubated neonate. Because of insufficient data in the literature, recommendations for preterm infants less than 37 weeks gestational age were not included in this guideline. However, as discussed in the following section on observation periods, the available data suggest that recovery of neurologic function is unlikely when a term newborn is diagnosed with brain death. Based on review of the literature, the task force supports that brain death can be diagnosed in term newborns (37 weeks gestation) and older, provided the physician is aware of the limitations of the clinical examination and ancillary studies in this age group. It is important to carefully and repeatedly examine term newborns, with particular attention to examination of brainstem reflexes and apnea testing. As with older children, assessment of neurologic function in the term newborn may be unreliable immediately following an acute catastrophic neurologic injury or cardiopulmonary arrest. A period of 24 hours or longer is recommended before evaluating the term newborn for brain death.

Apnea Testing

Neonatal studies reviewing $Paco_2$ thresholds for apnea are limited. However, data from 35 neonates who were ultimately determined to be brain dead revealed a mean $Paco_2$ of 65 mm Hg suggesting that the threshold of 60 mm Hg is also valid in the newborn.[35] Apnea testing in the term newborn may be complicated by the following: (1) Treatment with 100% oxygen may inhibit the potential recovery of respiratory effort.[71,72] (2) Profound bradycardia may precede hypercarbia and limit this test in neonates. A thorough neurologic examination must be performed in conjunction with the apnea test to make the determination of death in any patient. If the apnea test cannot be completed as previously described, the examination and apnea test can be attempted at a later time, or an ancillary study may be performed to assist with determination of death. Ancillary studies in newborns are less sensitive than in older children. There are no reported cases of any neonate who developed respiratory effort after meeting brain death criteria.

Observation Periods in Term Newborns

There is some experience concerning the duration of observation periods in neonates being evaluated for brain death. A review of 87 newborns revealed that the duration of coma from insult to brain death was 37 hours and the duration of time from the initial neurologic examination being indicative of brain death to final confirmation was 75 hours. The overall average duration of brain death in these neonates was about 95 hours or almost 4 days.[37] 53 neonates less than 7 days of age donating organs for transplantation had a total duration of brain death including time to transplantation that averaged 2.8 days; for neonates 1–3 weeks of age, the duration of brain death was approximately 5.2 days.[37] None of these patients recovered any neurologic function. These data suggest that once the diagnosis of brain death is made in newborns, recovery is unlikely. Based on data extracted from available literature and clinical experience the committee recommends the observation period between examinations should be 24 hours for term newborns (37 weeks) to 30 days of age.

Ancillary Studies

Ancillary studies performed in the newborn < 30 days of age are limited.[70] As summarized in Appendix 6, ancillary studies in this age group are less sensitive in detecting the pres-

ence/absence of brain electrical activity or cerebral blood flow than in older children. Of the two studies, detecting absence of CBF (63%) was more sensitive than demonstration of ECS (40%) in confirming the diagnosis of brain death, however even in the CBF study group the sensitivity was low.[70]

EEG activity is of low voltage in newborns raising concerns about a greater chance of having reversible ECS in this age group. In a retrospective review of 40 newborns with ECS, 9/10 with ECS on the initial EEG showed ECS on repeated studies.[70] The remaining patient had a phenobarbital level of 30 μg/mL at the time of the initial EEG, probably accounting for the initial ECS. Several other cases have been reported with initial ECS but careful review found that the patients were not clinically brain dead. Based on available data it is likely that if the initial EEG shows ECS (assuming an absence of correctable conditions) in a newborn who meets all clinical criteria for brain death, then it is an accurate and reliable predictor of brain death and repeat EEG studies are not indicated.

CBF in viable newborns can be extremely low because of the decreased level of brain metabolic activity.[50] However earlier studies using stable xenon computed tomography measurements of CBF have shown that the level of CBF in brain dead children is much lower than that seen in viable newborns.[73,74]

The available data suggest that ancillary studies in newborns are less sensitive than in older children. This can pose an important clinical dilemma in this age group where clinicians may have a greater level of uncertainty about performing a valid neurologic examination. There is a greater need to have more reliable and accurate ancillary studies in this age group. Awareness of this limitation would suggest that longer periods of observation and repeated neurologic examinations are needed before making the diagnosis of brain death and also that as in older infants and children, the diagnosis should be made clinically and based on repeated examinations rather than relying exclusively on ancillary studies.

DECLARATION OF DEATH (FOR ALL AGE GROUPS) (*RECOMMENDATIONS 6a–c, TABLE 1 AND APPENDIX 8 ALGORITHM*)

Death is declared after the second neurologic examination and apnea test confirms an unchanged and irreversible condition. An algorithm (Appendix 8) provides recommendations for the process of diagnosing brain death in children. When ancillary studies are used, documentation of components from the second clinical examination that can be completed, including a second apnea test, must remain consistent with brain death. All aspects of the clinical examination, including the apnea test, or ancillary studies must be appropriately documented. A checklist outlining essential examination and testing components is provided in Appendix 1. This checklist also provides standardized documentation to determine brain death.

ADDITIONAL CONSIDERATIONS (FOR ALL AGE GROUPS)

In today's modern pediatric and neonatal intensive care units, critical care practitioners and other physicians with expertise in neurologic injury are routinely called on to declare death in infants and children. Because the implications of diagnosing brain death are of great consequence, examination should be conducted by experienced clinicians who are familiar with neonates, infants and children and have specific training in neurocritical care. These physicians must be competent to perform the clinical examination and interpret results from ancillary studies. Qualified clinicians include: pediatric intensivists and neonatologists, pediatric neurologists and neurosurgeons, pediatric trauma surgeons, and pediatric anesthesiologists with critical care training. Adult specialists should have appropriate neurologic and critical care training to diagnose brain death when caring for the pediatric patient from birth to 18 years of age. Residents and fellows should be encouraged to learn how to properly perform brain death testing by observing and participating in the clinical examination and testing process performed by experienced attending physicians. It is recommended that both neurologic examinations be performed and documented by an attending physician who is qualified and competent to perform the brain death examination.

These revised pediatric brain death diagnostic guidelines are intended to provide an updated framework in an effort to promote standardization of the neurologic examination and use of ancillary studies. A standardized checklist (Appendix 1) will help to ensure that all components of the examination, and ancillary studies if needed, are completed and documented appropriately. Pediatric specialists should be invited to participate in the development of institutional guidelines to ensure that the brain death examination is conducted consistently each time the diagnosis is being considered. A comparison of the 1987 pediatric brain death guidelines and 2011 update for neonatal and pediatric brain death guidelines are listed in Appendix 7.

Diagnosing brain death must never be rushed or take priority over the needs of the patient or the family. Physicians are obligated to provide support and guidance for families as they face difficult end-of-life decisions and attempt to understand what has happened to their child. It is the responsibility of the physician to guide and direct families during the treatment of their child. Communication with families must be clear and concise using simple termi-

nology so that parents and family members understand that their child has died. Permitting families to be present during the brain death examination, apnea testing and performance of ancillary studies can assist families in understanding that their child has died. The family must understand that once brain death has been declared, their child meets legal criteria for death. Families may otherwise become confused or angry if discussions regarding withdrawal of support or medical therapies are entertained after declaration of death. It should be made clear that once death has occurred, continuation of medical therapies, including ventilator support, is no longer an option unless organ donation is planned. Appropriate emotional support for the family should be provided including adequate time to grieve with their child after death has occurred. Consultation or referral to the medical examiner or coroner may be required by state law in certain situations when death occurs.

FUTURE DIRECTIONS

Development of a national database to track infants and children who are diagnosed as brain dead should be strongly considered. Information compiled from this database would increase our knowledge about brain death, especially in neonates.

1. Studies comparing traditional ancillary studies to newer methods to assess CBF and neurophysiologic function should be pursued. Further information about ancillary studies, waiting periods, and research regarding validity of newer ancillary studies is needed for future recommendations to assist with determination of brain death in children.
2. Cerebral protective therapies such as hypothermia may alter the natural progression of brain death and their impact should be reviewed as more information becomes available. The clinician caring for critically ill infants and children should be aware of the potential impact of new therapeutic modalities on the diagnosis of brain death.
3. While each institution and state may have specific guidelines for the determination of brain death in infants and children, we should work with national medical societies to achieve a uniform approach to declaring death that can be incorporated in all hospital policies.[75] This will help eliminate confusion among medical personnel thereby fostering further trust from the community of patients and families that we serve.
4. Additional information or studies are required to determine if a single neurologic examination is sufficient for neonates, infants, and children to determine brain death as currently recommended for adults over 18 years of age.[12,76]

ENDORSEMENTS AND APPROVALS

This document has been reviewed and endorsed by the following societies:

American Academy of Pediatrics

Sub sections:

Section on Critical Care

Section on Neurology

American Association of Critical Care Nurses

Child Neurology Society

National Association of Pediatric Nurse Practitioners

Society of Critical Care Medicine

Society for Pediatric Anesthesia

Society of Pediatric Neuroradiology

World Federation of Pediatric Intensive and Critical Care Societies

American Academy of Neurology affirms the value of this manuscript.

The following societies have had the opportunity to review and comment on this document

American Academy of Pediatrics

Sub sections:

Committee on Bioethics

Committee on Child Abuse and Neglect

Committee on Federal Government Affairs

Committee on Fetus and Newborn

Committee on Hospital Care

Committee on Medical Liability and Risk Management

Committee on Pediatric Emergency Medicine

Committee on Practice and Ambulatory Medicine

Committee on State Government Affairs

Council on Children With Disabilities

Section on Anesthesiology and Pain Medicine

Section on Bioethics

Section on Child Abuse and Neglect

Section on Critical Care

Section on Emergency Medicine

Section on Hospital Medicine

Section on Neurology

Section on Perinatal Pediatrics

Section on Neurological Surgery

Section on Pediatric Surgery

The Pediatric Section of the American Association of Neurosurgeons and the Congress of Neurologic Surgeons have been provided the opportunity to review this document

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REFERENCES

1. American Academy of Pediatrics, Task Force on Brain Death in Children. Report of Special Task Force: guidelines for determination of brain death in children. *Pediatrics.* 1987;80(2):298–300
2. Guidelines for determination of brain death in children. *Pediatr Neurol.* 1987;3(4):242–243
3. Chang MY, McBride LA, Ferguson MA. Variability in brain death declaration practices in pediatric head trauma patients. *Pediatr Neurosurg.* 2003;39(1):7–9
4. Mejia RE, Pollack MM. Variability in brain death determination practices in children. *JAMA.* 1995;274(7):550–553
5. Mathur M, Petersen L, Stadtler M, et al. Variability in pediatric brain death determination and documentation in southern California. *Pediatrics.* 2008;121(5):988–993
6. Hornby K, Shemie SD, Teitelbaum J, Doig C. Variability in hospital-based brain death guidelines in Canada. *Can J Anaesth.* 2006; 53(6):613–619
7. Joffe AR, Anton N. Brain death: understanding of the conceptual basis by pediatric intensivists in Canada. *Arch Pediatr Adolesc Med.* 2006;160(7):747–752
8. Lynch J, Eldadah MK. Brain-death criteria currently used by pediatric intensivists. *Clin Pediatr (Phila).* 1992;31(8):457–460
9. Harrison AM, Botkin JR. Can pediatricians define and apply the concept of brain death? *Pediatrics.* 1999;103(6). Available at: www.pediatrics.org/cgi/content/full/103/6/e82
10. Greer DM, Varelas PN, Haque S, Wijdicks EFM. Variability of brain death determination guidelines in leading US neurologic institutions. *Neurology.* 2008;70(4):284–289
11. Practice parameters for determining brain death in adults. *Neurology.* 1995;45(5): 1012–1014
12. Wijdicks EFM, Varelas PN, Greer DM. Determining brain death in adults: 2009 guideline update. *Neurology.* 2010;74(23):1911–1918
13. Shemie SD, Doig C, Dickens B, et al; Pediatric Reference Group; Neonatal Reference Group. Severe brain injury to neurological determination of death: Canadian forum recommendations. *CMAJ.* 2006;174(6):S1–13
14. Atkins D, Best D, Briss PA, et al; GRADE Working Group. Grading quality of evidence and strength of recommendations. *BMJ.* 2004; 328(7454):1490–1494
15. Guyatt GH, Oxman AD, Kunz R, et al. Rating quality of evidence and strength of recommendations. GRADE: going from evidence to recommendations. *BMJ.* 2008;336(7652):1049–1051
16. Jaeschke R, Guyatt GH, Dellinger P, et al; GRADE Working Group. Use of GRADE grid to reach decisions on clinical practice guidelines when consensus is elusive. *BMJ.* 2008; 337:a744
17. Guyatt GH, Oxman AD, Vist GE, et al; GRADE Working Group. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. *BMJ.* 2008; 336(7650):924–926
18. Grade Working Group. Home page. Available at: www.gradeworkinggroup.org. Accessed September 19, 2009
19. Hutchison JS, Ward RE, Lacroix J, et al. Hypothermia therapy after traumatic brain injury in children. *N Engl J Med.* 2008;358(23): 2447–2456
20. Biswas AK, Bruce DA, Sklar FH, et al. Treatment of acute traumatic brain injury in children with moderate hypothermia improves intracranial hypertension. *Crit Care Med.* 2002;30(12):2742–2751
21. Adelson PD, Ragheb J, Kanez P, et al. Phase II clinical trial of moderate hypothermia after traumatic brain injury in children. *Neurosurgery.* 2005;56(4):740–754
22. Azzopardi DV, Strohm B, Edwards AD, et al; TOBY Study Group. Moderate hypothermia to treat perinatal asphyxial encephalopathy. *N Engl J Med.* 2009;361(14):1349–1358
23. Hutchison JS, Doherty DR, Orlowski JP, Kissoon N. Hypothermia therapy for cardiac arrest in pediatric patients. *Pediatr Clin North Am.* 2008;55(3):529–544
24. Kochanek PM, Fink EL, Bell JM, Bayir H, Clark RSB. Therapeutic hypothermia: applications in pediatric cardiac arrest. *J Neurotrauma.* 2009;26(3):421–427
25. Doherty DR, Parshuram CS, Gaboury I, et al. Hypothermia after pediatric cardiac arrest. *Circulation.* 2009;119(11):1492–1500
26. Hoehn T, Hansmann G, Buhrer C, et al. Therapeutic hypothermia in neonates: review of current clinical data, ILCOR recommendations and suggestions for implementation in neonatal intensive care units. *Resuscitation.* 2008;78(1):7–12
27. Danzl DF, Pozos RS. Accidental hypothermia. *N Engl J Med.* 1994;331(26):1756–1760
28. Abend NS, Kessler SK, Helfaer MA, Licht DJ. I: evaluation of the comatose child. In: Nichols DG *Rogers Textbook of Pediatric Intensive Care.* 4th ed. Philadelphia, PA: Lippincott, Williams & Wilkins; 2008:846–861
29. Michelson DJJ, Ashwal S. Evaluation of coma. In: Wheeler DS, Wong HR, Shanley TP *Pediatric Critical Care Medicine: Basic Science and Clinical Evidence.* London, United Kingdom: Springer-Verlag; 2007: 924–934
30. Booth CM, Boone RH, Tomlinson G, Detsky AS. Is this patient dead, vegetative, or severely neurologically impaired? Assessing outcome for comatose survivors of cardiac arrest. *JAMA.* 2004;291(7):870–879
31. Haque IU, Udassi JP, Zaritsky AL. Outcome following cardiopulmonary arrest. *Pediatr Clin North Am.* 2008;55(4):969–987
32. Mandel R, Marinot A, Delepoulle F. Prediction of outcome after hypoxic-ischemic encephalopathy: a prospective clinical and electrophysiologic study. *J Pediatr.* 2002;141(1):45–50
33. Carter BG, Butt W. A prospective study of outcome predictors after severe brain injury in children. *Intensive Care Med.* 2005;31(6):840–845
34. Ashwal S, Schneider S. Brain death in children: part I. *Pediatr Neurol.* 1987;3(1):5–11
35. Ashwal S. Brain death in the newborn: current perspectives. *Clin Perinatol.* 1997; 24(4):859–882
36. Parker BL, Frewen TC, Levin SD, et al. Declaring pediatric brain death: current practice in a Canadian pediatric critical care unit. *CMAJ.* 1995;153(7):909–916
37. Ashwal S. Clinical diagnosis and confirmatory testing of brain death in children. In: Wijdick E *Brain Death.* Philadelphia, PA: Lippincott, William & Wilkins; 2001:91–114
38. Joffe AR, Kolski H, Duff J, deCaen AR. A 10 month old with reversible findings of brain death. *Pediatr Neurol.* 2009;41(5):378–382
39. Riviello JJ, Sapin JI, Brown LW, et al. Hypoxemia and hemodynamic changes during the hypercarbia stimulation test. *Pediatr Neurol.* 1988;4(4):213–218
40. Outwater KM, Rockoff MA. Apnea testing to confirm brain death in children. *Crit Care Med.* 1984;12(4):357–358
41. Rowland TW, Donnelly JH, Jackson AH. Apnea documentation for determination of brain death in children. *Pediatrics.* 1984; 74(4):505–508
42. Paret G, Barzilay Z. Apnea testing in suspected brain dead children: physiological and mathematical modeling. *Intensive Care Med.* 1995;21(3):247–252
43. Vardis R, Pollack MM. Altered apnea threshold in a pediatric patient with suspected brain death. *Crit Care Med.* 1998;26(11):1917–1919
44. Brilli RJ, Bigos D. Threshold in a child with suspected brain death. *J Child Neurol.* 1995; 10(3):245–246
45. Haun SE, Tobias JD, Deshpande JK. Apnoea testing in the determination of brain death: is it reliable? *Clin Intensive Care.* 1991;2(3):182–184
46. Okamoto K, Sugimoto T. Return of spontaneous respiration in an infant who fulfilled

current criteria to determine brain death. *Pediatrics*. 1995;96(3 pt 1):518–520

47. Fishman MA. Validity of brain death criteria in infants. *Pediatrics*. 1995;96(3 pt 1):513–515
48. Wijdicks E. Confirmatory testing of brain death in adults: In: Wijdicks E, ed. *Brain Death*. Philadelphia, PA: Lippincott, William & Wilkins; 2001:61–90
49. Donohoe KJ, Frey KA, Gerbaudo VH, et al. Procedure guideline for brain death scintigraphy. *J Nucl Med*. 2003;44(5):846–851
50. ACR Practice Guideline for the performance of single photon emission computed tomography (SPECT) brain perfusion and brain death studies. *ACR Practice Guidelines and Technical Standards*. 2007;Res21-2007:823–828
51. American Electroencephalographic Society. Guideline three: minimum technical standards for EEG recording in suspected cerebral death. *J Clin Neurophysiol*. 1994;11(1):10–13
52. LaMancusa J, Cooper R, Vieth R, Wright F. The effects of the falling therapeutic and subtherapeutic barbiturate blood levels on electrocerebral silence in clinically brain-dead children. *Clin Electroencephalogr*. 1991;22(2):112–117
53. López-Navidad A, Caballero F, Domingo P, et al. Early diagnosis of brain death in patients treated with central nervous system depressant drugs. *Transplantation*. 2000; 70(1):131–135
54. Ashwal S. Brain death in early infancy. *J Heart Lung Transplant*. 1993;12(6 pt 2):S176–S178
55. Drake B, Ashwal S, Schneider S. Determination of cerebral death in the pediatric intensive care unit. *Pediatrics*. 1986;78(1):107–112
56. Alvarez LA, Moshe SL, Belman AL, et al. EEG and brain death determination in children. *Neurology*. 1988;38(2):227–230
57. Ashwal S, Schneider S. Brain death in children: part II. *Pediatr Neurol*. 1987;3(2):69–77
58. Ashwal S, Smith AJ, Torres F, et al. Radionuclide bolus angiography: a technique for verification of brain death in infants and children. *J Pediatr*. 1977;91(5):722–727
59. Coker SB, Dillehay GL. Radionuclide cerebral imaging for confirmation of brain death in children: the significance of dural sinus activity. *Pediatr Neurol*. 1986;2(1):43–48
60. Ruiz-GarcíA Gonzalez-Astiazaran M, Collado-Corona A, A et al. M,Brain death in children: clinical, neurophysiological and radioisotopic angiography findings in 125 patients. *Childs Nerv Syst*. 2000; 16(1):40–45
61. Ruiz-López MJ, Martinez de Azagra A, Serrano A, Casado-Flores J. Brain death and evoked potentials in pediatric patients. *Crit Care Med*. 1999;27(2):412–416
62. Holzman BH, Curless RG, Sfakianakis GN, et al. Radionuclide cerebral perfusion scintigraphy in determination of brain death in children. *Neurology*. 1983;33(8):1027–1031
63. Furgiuele TL, Frank LM, Riegle C, et al. Prediction of cerebral death by cranial sector scan. *Crit Care Med*. 1984;12(1):1–3
64. Okuyaz C, Gucuyener K, Karabacak NI, et al. Tc-99m-HMPAO SPECT in the diagnosis of brain death in children. *Pediatr Int*. 2004; 46(6):711–714
65. Ashwal S, Schneider S. Brain death in the newborn. *Pediatrics*. 1989;84(3):429–437
66. Shimizu N, Shemie S, Miyasaka E, et al. Preliminary report: use of clinical criteria for the determination of pediatric brain death and confirmation by radionuclide cerebral blood flow. *Masui*. 2000;49(10):1126–1132
67. Ahmann PA, Carrigan TA, Carlton D, et al. Brain death in children: characteristic common carotid arterial velocity patterns measured with pulsed Doppler ultrasound. *J Pediatr*. 1987;110(5):723–728
68. Schwartz JA, Baxter J, Brill DR. Diagnosis of brain death in children by radionuclide cerebral imaging. *Pediatrics*. 1984;73(1):14–18
69. Conrad GR, Sinha P. Scintigraphy as a confirmatory test of brain death. *Semin Nucl Med*. 2003;33(4):312–323
70. Ashwal S. Brain death in the newborn. *Clin Perinatol*. 1989;16(2):501–518
71. Saugstad OD, Rootwelt T, Aalen O. Resuscitation of asphyxiated newborn infants with room air or oxygen: an international controlled trial: the Resair 2 study. *Pediatrics*. 1998;102(1). Available at: www.pediatrics.org/cgi/content/full/102/1/e1
72. Hutchison AA. Recovery from hypopnea in preterm lambs: effects of breathing air or oxygen. *Pediatr Pulmonol*. 1987;3(5):317–323
73. Ashwal S, Schneider S, Thompson J. Xenon computed tomography cerebral blood flow in determination of brain death in children. *Ann Neurol*. 1989;25(6):539–546
74. Altman DI, Powers WJ, Perlman JM, et al. Cerebral blood flow requirement for brain viability in newborn infants is lower than adults. *Ann Neurol*. 1988;24(2):218–226
75. Choi EK, Fredland V, Zachodni C, et al. Brain death revisited: the case for a national standard. *J Law Med Ethics*. 2008;36(4):824–836
76. Lustbader D, O'Hara D, Wijdicks EF, et al. Second brain death examination may negatively affect organ donation. *Neurology*. 2011;76(2):119–124
77. Burtin P, Jacqz-Aigrain E, Girard P, et al. Population pharmacokinetics of midazolam in neonates. *Clin Pharmacol Ther*. 1994;56(6 pt 1):615–625
78. de Wildt SN, Kearns GL, Hop WC, et al. Pharmacokinetics and metabolism of intravenous midazolam in preterm infants. *Clin Pharmacol Ther*. 2001;70(6):525–531
79. Taketomo CK, Hodding JH, Kraus DM. Pediatric Dosage Handbook 16th Ed. Hudson, Ohio: Lexi-Comp, 2009
80. de Wildt SN, de Hoog M, Vinks AA, van der Giesen E, van den Anker JN. Population pharmacokinetics and metabolism of midazolam in pediatric intensive care patients. *Crit Care Med*. 2003;31(7):1952–1958
81. Czaja AS, Zimmerman JJ. The use of dexmedetomidine in critically ill children. *Pediatr Crit Care Med*. 2009;10(3):381–386
82. Díaz SM, Rodarte A, Foley J, Capparelli EV. Pharmcokinetics of dexmedetomidine in postsurgical pediatric intensive care unit patients: preliminary study. *Pediatr Crit Care Med*. 2007;8(5):419–424
83. Potts AL, Andreson BJ, Warman GR, et al. Demedetomidine pharmacokinetics in pediatric intensive care: a pooled analysis. *Paediatr Anaesth*. 2009;19(11):1119–1129
84. Gherpelli JL, Cruz AM, Tsanaclis LM, et al. Phenobarbital in newborns with neonatal seizures: a study of plasma levels after intravenous administration. *Brain Dev*. 1993; 15(4):258–262
85. Touw DJ, Graafland O, Cranendonk A, et al. Clinical pharmacokinetics of phenobarbital in neonates. *Eur J Pharm Sci*. 2000;12(2):111–116
86. Morselli PL, Principi N, Tognoni G, et al. Diazepam elimination in premature and full term infants, and children. *J Perinat Med*. 1973;1(2):133–141
87. Peinemann R, Daltrup T. Severe and prolonged sedation in five neonates due to persistence of active diazepam metabolites. *Eur J Pediatr*. 2001;160(6):378–381
88. McDermott CA, Kowalczyk AL, Schnitzler ER, et al. Pharmacokinetics of lorazepam in critically ill neonates with seizures. *J Pediatr*. 1992;120(3):479–483
89. Saarenmaa E, Neuvonen PJ, Rosenberg P, Fellman V. Morphine clearance and effects in newborn infants in relation to gestational age. *Clin Pharmacol Ther*. 2000;68(2):160–166
90. Chay PC, Duffy BJ, Walker JS. Pharmacokinetic-pharmacodynamic relationships of morphine in neonates. *Clin Pharmacol Ther*. 1992;51(3):334–342
91. Róka A, Melinda KT, Vásárhelyi B, Machay T, Azzopardi D, Szabó M. Elevated morphine concentrations in neonates treated with morphine and prolonged hypothermia for hypoxic ischemic encephalopathy. *Pediatrics*. 2008;121(4). Available at: www.pediatrics.org/cgi/content/full/121/4/e844

APPENDIX 1 Check List for Documentation of Brain Death

Brain Death Examination for Infants and Children

Two physicians must perform independent examinations separated by specified intervals.

Age of Patient	Timing of first exam	Inter-exam. Interval
Term newborn 37 weeks gestational age and up to 30 days old	☐ First exam may be performed 24 hours after birth OR following cardiopulmonary resuscitation or other severe brain injury	☐ At least 24 hours ☐ Interval shortened because ancillary study (section 4) is consistent with brain death
31 days to 18 years old	☐ First exam may be performed 24 hours following cardiopulmonary resuscitation or other severe brain injury	☐ At least 12 hours OR ☐ Interval shortened because ancillary study (section 4) is consistent with brain death

Section 1. PREREQUISITES for brain death examination and apnea test

A. IRREVERSIBLE AND IDENTIFIABLE Cause of Coma (Please check)

☐ Traumatic brain injury ☐ Anoxic brain injury ☐ Known metabolic disorder ☐ Other (Specify) _____

B. Correction of contributing factors that can interfere with the neurologic examination	**Examination One**		**Examination Two**	
a. Core Body Temp is over 95° F (35° C)	☐ Yes	☐ No	☐ Yes	☐ No
b. Systolic blood pressure or MAP in acceptable range (Systolic BP not less than 2 standard deviations below age appropriate norm) based on age	☐ Yes	☐ No	☐ Yes	☐ No
c. Sedative/analgesic drug effect excluded as a contributing factor	☐ Yes	☐ No	☐ Yes	☐ No
d. Metabolic intoxication excluded as a contributing factor	☐ Yes	☐ No	☐ Yes	☐ No
e. Neuromuscular blockade excluded as a contributing factor	☐ Yes	☐ No	☐ Yes	☐ No

☐ If ALL prerequisites are marked YES, then proceed to section 2, OR

☐ _____ confounding variable was present. Ancillary study was therefore performed to document brain death. (Section 4).

Section 2. Physical Examination (Please check) **NOTE: SPINAL CORD REFLEXES ARE ACCEPTABLE**	**Examination One** **Date/ time:**		**Examination Two** **Date/ Time:**	
a. Flaccid tone, patient unresponsive to deep painful stimuli	☐ Yes	☐ No	☐ Yes	☐ No
b. Pupils are midposition or fully dilated and light reflexes are absent	☐ Yes	☐ No	☐ Yes	☐ No
c. Corneal, cough, gag reflexes are absent	☐ Yes	☐ No	☐ Yes	☐ No
Sucking and rooting reflexes are absent (in neonates and infants)	☐ Yes	☐ No	☐ Yes	☐ No
d. Oculovestibular reflexes are absent	☐ Yes	☐ No	☐ Yes	☐ No
e. Spontaneous respiratory effort while on mechanical ventilation is absent	☐ Yes	☐ No	☐ Yes	☐ No

☐ The _____ (specify) element of the exam could not be performed because _____

Ancillary study (EEG or radionuclide CBF) was therefore performed to document brain death. (Section 4).

Section 3. APNEA Test	**Examination One** **Date/ Time**	**Examination Two** **Date/ Time**
No spontaneous respiratory efforts were observed despite final $PaCO_2 \geq 60$ mm Hg and a ≥ 20 mm Hg increase above baseline. (Examination One) No spontaneous respiratory efforts were observed despite final $PaCO_2 \geq 60$ mm Hg and a ≥ 20 mm Hg increase above baseline. (Examination Two)	Pretest $PaCO_2$: _____ Apnea duration: _____min Posttest $PaCO_2$: _____	Pretest $PaCO_2$: _____ Apnea duration: _____min Posttest $PaCO_2$: _____

Apnea test is contraindicated or could not be performed to completion because _____

Ancillary study (EEG or radionuclide CBF) was therefore performed to document brain death. (Section 4).

Section 4. ANCILLARY testing is required when (1) any components of the examination or apnea testing cannot be completed; (2) if there is uncertainty about the results of the neurologic examination; or (3) if a medication effect may be present. **Ancillary testing can be performed to reduce the inter-examination period however a second neurologic examination is required. Components of the neurologic examination that can be performed safely should be completed in close proximity to the ancillary test**	**Date/Time:**
☐ Electroencephalogram (EEG) report documents electrocerebral silence OR	☐ Yes ☐ No
☐ Cerebral Blood Flow(CBF) study report documents no cerebral perfusion	☐ Yes ☐ No

Section 5. Signatures

Examiner One

I certify that my examination is consistent with cessation of function of the brain and brainstem. Confirmatory exam to follow.

_____ _____

(Printed Name) (Signature)

_____ _____ _____ _____

(Specialty) (Pager #/License #) (Date mm/dd/yyyy) (Time)

Examiner Two

I ☐ certify that my examination( ) and/or ancillary test report ☐ confirms unchanged and irreversible cessation of function of the brain and brainstem. The patient is declared brain dead at this time.

Date/Time of death: _____

_____ _____

(Printed Name) (Signature)

_____ _____ _____ _____

(Specialty) (Pager #/License #) (Date mm/dd/yyyy) (Time)

APPENDIX 2 Medications Administered to Critically Ill Pediatric Patients and Recommendations for Time Interval to Testing After Discontinuation

Medication	Infants/Children Elimination ½ life	Neonates Elimination ½ life
Intravenous induction, anesthetic, and sedative agents		
Thiopental	Adults: 3–11.5 hours (shorter ½ life in children)	
Ketamine	2.5 hours	
Etomidate	2.6–3.5 hours	
Midazolam	2.9–4.5 hours	4–12 hours[77–80]
Propofol	2–8 minutes, Terminal ½ life 200 minutes (range 300–700 minutes)	
Dexmedetomidine	Terminal ½ life 83–159 minutes[79,81]	Infants have faster clearance[81,83]
Antiepileptic drugs		
Phenobarbital	Infants: 20–133 hours*	45–500 hours*[79,84,85]
	Children: 37–73 hours*	
Pentobarbital	25 hours*	
Phenytoin	11–55 hours*	63–88 hours*
Diazepam	1 month–2 years: 40–50 hours	50–85 hours[79,86,87]
	2 years–12 years: 15–21 hours	
	12–16 years: 18–20 hours	
Lorazepam	Infants: 40.2 hours (range 18–73 hours)	40 hours[88]
	Children: 10.5 hours (range 6–17 hours)	
Clonazepam	22–33 hours	
Valproic Acid	Children > 2 months: 7–13 hours*	10–67 hours*
	Children 2–14 years: Mean 9 hours; range 3.5–20 hours	
Levetiracetam	Children 4–12 years: 5 hours	
Intravenous narcotics		
Morphine sulfate	Infants 1–3 months: 6.2 hours (5–10 hours)	7.6 hours (range 4.5–13.3 hours)[79,89–91]
	6 months–2.5 years: 2.9 hours (1.4–7.8 hours)	
	Children: 1–2 hours	
Meperidine	Infants < 3 months: 8.2–10.7 hours (range 4.9–31.7 hours)	23 hours (range 12–39 hours)
	Infants 3–18 months: 2.3 hours	
	Children 5–8 years: 3 hours	
Fentanyl	5 months–4.5 years: 2.4 hours (mean) 0.5–14 years: 21 hours (range 11–36 hours for long term infusions)	1–15 hours
Sufentanil	Children 2–8 years: 97 ± 42 minutes	382–1162 minutes
Muscle relaxants		
Succinylcholine	5–10 minutes	
	Prolonged duration of action in patients with pseudocholinesterase deficiency or mutation	
Pancuronium	110 minutes	
Vecuronium	41 minutes	65 minutes
Atracurium	17 minutes	20 minutes
Rocuronium	3–12 months: 1.3 ± 0.5 hours	
	1 to < 3 years: 1.1 ± 0.7 hours	
	3 to < 8 years: 0.8 ± 0.3 hours	
	Adults: 1.4–2.4 hours	

Modified from Ashwal and Schneider.[37]

Metabolism of pharmacologic agents may be effected by organ dysfunction and hypothermia.

Physicians should be aware of total amounts of administered medication that can affect drug metabolism and levels.

* Elimination ½ life does not guarantee therapeutic drug levels for longer acting medications or medications with active metabolites. Drug levels should be obtained to ensure that levels are in a low to mid therapeutic range prior to neurologic examination to determine brain death. In some instances this may require waiting several half-lives and rechecking serum levels of the medication before conducting the brain death examination.

APPENDIX 3 Apnea Testing in Pediatric Brain Death

Author	*n*	Age Range	$Paco_2$	Comments
Rowland (1984)[41]	9 children, 18 apnea tests performed	4 months–13 years	Range: 60–116 mm Hg after 15 minutes of apnea	No spontaneous respiratory effort noted in any patient during testing. Phenobarbital levels of 10,11.6,18,25 mg/dL were measured in 4 patients.
Outwater & Rockoff (1984)[40]	10 children	10 months–13 years	Mean 59.5 ± 10.2 mm Hg after 5 minutes of apnea	No spontaneous respiratory effort noted in any patient during testing or after support was withdrawn
Riviello (1988)[39]	19 children	2 months–15 years	Mean 63.9 ± 21.5 mm Hg	2 children with Pco_2 levels of 24 mm Hg and 38 mm Hg had spontaneous respirations during the apnea test. All other children had no spontaneous respiratory effort noted after support was withdrawn.
Paret (1995)[42]	38 children, 61 apnea tests performed	2 months–17 years	Mean 68.07 ± 17.66 after 5 minutes Mean 81.8 ± 20.2 after 10 minutes Mean 86.88 ± 25.6 after 15 minutes	1 child had spontaneous respiratory effort with a $Paco_2$ of 49 mm Hg. This patient was retested 24 hours later and had no respiratory effort.

APPENDIX 4 EEG in Pediatric Brain Death: Diagnostic Yield From First Versus Any Study

Study	Total # Pts in Study	% Patients With ECS on EEG#1	% Patients With ECS on Any EEG	% Pts With ECS on f/u EEG When First EEG Had ECS	% Pt With ECS on Later EEGs When First EEG Had Activity
Ruiz-Garcia et al, 2000 (60)	125	72% (88/122)	91% (111/122)	NA	68% (23/34)
Drake et al, 1986[55]	61	70% (33/47)	91% (43/47)	100% (17/17)	71% (10/14)
Parker et al, 1995[58]	60	100% (9/9)	100% (9/9)	NA	NA
Alvarez et al, 1988[56]	52	100% (52/52)	100% (52/52)	100% (28/28)	NA
Ashwal, 1983[54]	52	85% (28/33)	85% (28/33)	100% (3/3)	0% (0/1)
Ruiz-Lopez et al, 1999[61]	51	48% (14/29)	72% (21/29)	NA	47% (7/15)
Ashwal & Schneider, 1989[65]	18	50% (9/18)	78% (14/18)	88% (7/8)	56% (5/9)
Holzman et al, 1983[62]	18	61% (11/18)	67% (12/18)	67% (2/3)	14% (1/7)
Ashwal et al, 1977[58]	15	67% (10/15)	73% (11/15)	100% (2/2)	20% (1/5)
Coker et al, 1986[59]	14	100% (11/11)	100% (11/11)	100% (5/5)	NA
Furgiuele et al, 1984[63]	11	100% (10/10)	100% (10/10)	NA	NA
Okuyaz et al, 2004[64]	8	100% (8/8)	100% (8/8)	NA	NA
Total	485	76% (283/372)	89% (330/372)	97% (64/66)	55% (47/85)

EEG Electroencephalogram.
ECS Electrocerebral silence.

APPENDIX 5 CBF in Pediatric Brain Death: Diagnostic Yield From First Versus Any Study

Study	Total # of Pts in Study	CBF#1: % Patients With Absent CBF*	% Patients With Absent CBF on Any Study**	% Pts With No CBF on f/u Study When First Study Had Shown No CBF	% Pt With No CBF on Later Study When First Study Had CBF Present
Shimizu et al, 2000[66]	228	100% (27/27)	100% (27/27)	NA	NA
Ruiz-Garcia et al, 2000[60]	125	92% (83/90)	92% (83/90)	NA	NA
Drake et al, 1986[55]	61	68% (32/47)	81% (38/47)	100% (17/17)	40% (6/15)
Parker et al, 1995[58]	60	87% (26/30)	87% (26/30)	NA	NA
Coker et al, 1986[59]	55	100% (55/55)	100% (55/55)	NA	NA
Ashwal, 1993[54]	52	86% (19/22)	86% (19/22)	NA	NA
Ahmann et al, 1987[67]	32	83% (6/6)	83% (6/6)	NA	NA
Ashwal &Schneider, 1989[65]	18	65% (11/17)	65% (11/17)	71% (5/7)	0% (0/3)
Holzman et al, 1983[62]	18	39% (7/18)	44% (8/18)	100% (2/2)	9% (1/11)
Ashwal et al, 1977[58]	15	100% (11/11)	100% (11/11)	NA	NA
Schwartz et al, 1984[68]	9	100% (9/9)	100% (9/9)	NA	NA
Okuyaz et al, 2004[64]	8	75% (6/8)	100% (8/8)	NA	100% (2/2)
Total	681	86% (292/340)	89% (301/340)	92% (24/26)	26% (9/34)

* # pts with no CBF on first study/# pts with first CBF study.
** # pts with no CBF on any study/# pts with any CBF
CBF Cerebral blood flow.

APPENDIX 6 EEG and CBF Diagnostic Screening Yield by Age Groups

	ECS	EEG+	Total	Diagnostic Screening Yield
All children (n = 149)*				
No CBF	86	18	104	% pt with ECS = 70%
CBF+	19	26	45	% pts with no CBF = 70%
Total	105	44	149	
Just newborns (< 1 month of age; n = 30)**				
No CBF	8	11	19	% pt with ECS = 40%
CBF+	4	7	11	% pts with no CBF = 63%
Total	12	18	30	
Children (> 1 month of age; n = 118)***				
No CBF	78	7	85	% pt with ECS = 78%
CBF+	15	19	34	% pts with no CBF = 71%
Total	93	26	119	

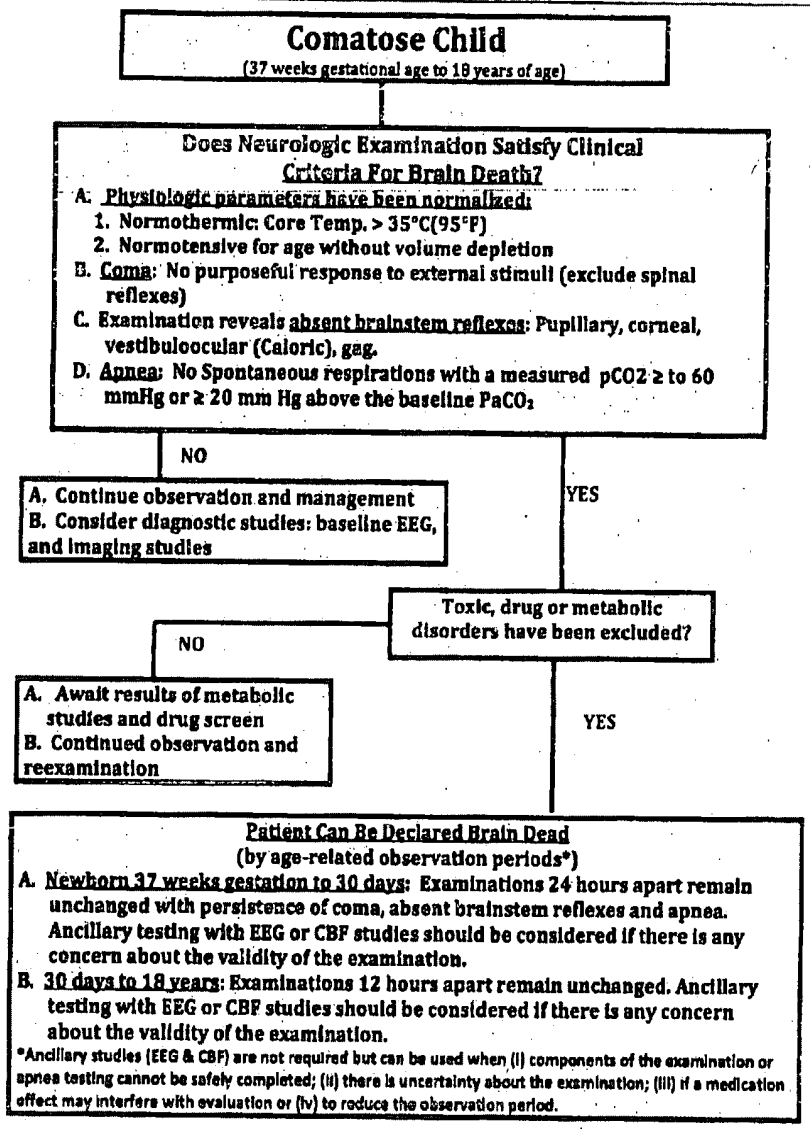
* Data extracted from references cited in Appendix 4,5.
** Data extracted from references cited in Ashwal S.[18]
*** Data represent the differences between "All children" and "just newborns" groups.
ECS Electrocerebral silence.
CBF Cerebral blood flow.
EEG+ Activity on EEG.
CBF+ Cerebral blood flow present.

APPENDIX 7 Comparison of 1987 Pediatric Brain Death Guidelines and the Updated Guideline for Determination of Brain Death in Infants and Children

	1987	Updated Guidelines
Waiting period before initial brain death examination	Not specified	24 hours following cardiopulmonary resuscitation or severe acute brain injury is suggested if there are concerns about the neurologic examination or if dictated by clinical judgment
Clinical examination	Required	Required
Core body temperature	Not specified	> 35°C (95°F)
Number of examinations	Two exams 2nd examination not necessary in 2 months–1 year age group if initial examination, EEG and concomitant CBF consistent with brain death	Two exams, irrespective of ancillary study results (if ancillary testing is being done in lieu of initial examination elements that cannot be safely performed, the components of the second examination that can be done must be completed)
Number of examiners	Not specified	Two (Different attending physicians must perform the first and second exam)
Observation interval between neurologic examinations	Age dependent • 7 days–2 months: 48 hours • 2 months–1 year: 24 hours • >1 year: 12 hours (24 hrs if HIE)	Age Dependent • Term newborn (37 weeks gestation) to 30 days of age: 24 hours • 31 days–18 years: 12 hours
Reduction of observation period between exams	Permitted only for > 1 year age group if EEG or CBF consistent with brain death	Permitted for both age groups if EEG or CBF consistent with brain death
Apnea testing	Required, number of tests ambiguous	Two apnea tests required unless clinically contraindicated
Final Pco_2 threshold for apnea testing	Not specified	≥60 mm Hg and ≥20 mm Hg above the baseline $Paco_2$
Ancillary study recommended	• Age dependent 7 days–2 months: 2 EEGs separated by 48 hrs • 2 months–1 year: 2 EEG's separated by 24 hours. CBF can replace the need for 2nd EEG • >1 year: No testing required	Not required except in cases where the clinical examination and apnea test cannot be completed • Term newborn (37 weeks gestation) to 30 days of age: EEG or CBF are less sensitive in this age group. CBF may be preferred. • >30 days–18 years: EEG and CBF have equal sensitivity
Time of death	Not specified	Time of the second examination and apnea test (or completion of ancillary study and the components of the second examination that can be safely completed)

EEG Electroencephalogram.
CBF Cerebral blood flow.
HIE Hypoxic ischemic encephalopathy.

APPENDIX 8 Algorithm to Diagnose Brain Death in Infants and Children



APPENDIX 9 Taskforce Organization

Sub-Committee Chairs

Brain death examination criteria and testing intervals: Mudit Mathur, MD, FAAP, Mohan Mysore, MD, FAAP, FCCM, Thomas A. Nakagawa, MD, FAAP, FCCM

Ancillary testing: Stephen Ashwal, MD, FAAP

Declaration of death, legal, and ethical implications: Jacqueline A. Williams-Phillips, MD, FCCM

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Guidelines for the Determination of Brain Death in Infants and Children: An Update of the 1987 Task Force Recommendations

Thomas A. Nakagawa, Stephen Ashwal, Mudit Mathur, Mohan Mysore and the Society of Critical Care Medicine, Section on Critical Care and Section on Neurology of the American Academy of Pediatrics, and the Child Neurology Society

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SUPERIOR COURT OF CALIFORNIA
COUNTY OF ALAMEDA

Case Number: Winkfield vs. Children's Hospital Oakland

Case Name: RP13707598

1) Order Appointing Dr. Paul Fisher as Court Expert Witness

DECLARATION OF SERVICE BY MAIL

I certify that I am not a party to this cause and that a true and correct copy of the foregoing document was mailed first class, postage prepaid, in a sealed envelope, addressed as shown below by placing it for collection, stamping or metering with prepaid postage, and mailing on the date stated below, in the United States mail at Alameda County, California, following standard court practices.

I declare under penalty of perjury that the foregoing is true and correct. Executed on

October 7, 2014

Executive Officer/Clerk of the Superior Court
By M. Scott Sanchez, Deputy Clerk

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F

FILED
ALAMEDA COUNTY
OCT - 8 2014
By

SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF ALAMEDA

LATASHA WINKFIELD, the Mother of Jahi McMath, a minor Petitioner, v. CHILDREN'S HOSPITAL OAKLAND, Dr. David Durand M.D. and DOES 1 through 100, inclusive Respondents	Case No. RP13-707598 CASE MANAGEMENT ORDER (1) CONFIRMING PETITIONER'S WITHDRAWAL OF PETITION FOR WRIT OF ERROR CORAM NOBIS AND (2) STATING THERE WILL BE NO CMC ON 10/9/14.

BACKGROUND.

On December 9, 2013, Jahi McMath, a thirteen year old child, had a tonsillectomy performed at Children's Hospital of Oakland ("CHO"). On December 11 and 12, 2013, Dr. Robert Heidersbach, and Dr. Robin Shanahan examined Jahi and concluded that she had suffered brain death under accepted medical standards.

On December 20, 2013, Petitioner filed this action seeking to compel Children's Hospital to provide medical treatment to Jahi. The parties agreed to an examination of Jahi by Paul Fisher MD, the Chief of Child Neurology for the Stanford University School of Medicine to provide an independent opinion pursuant to Health and Safety Code section 7181. Dr. Fisher

EXHIBIT F

examined Jahi the afternoon of December 23, 2013. Dr. Fisher opined that Jahi was brain dead under accepted medical standards. On December 24, 2014, the court held a hearing and then announced from the bench that the court's order was to deny the petition for medical treatment.

On December 26, 2014, the court issued a written order that denied the petition for medical treatment. In the course of addressing the claims in the petition, the court found that Jahi had suffered brain death as defined by Health and Safety Codes 7180 and 7181.

On January 3, 2014, the court held a hearing and issued an order that denied Petitioner's motion for a court order ordering either that Respondent insert a feeding tube and a tracheal tube into the person of Jahi McMath or that Respondent permit Petitioner to have a physician insert a feeding tube and a tracheal tube into the person of Jahi McMath at the hospital. In explaining that decision, the court stated, "Jahi McMath has been found to be brain dead pursuant to Health and Safety Code sections 7180-7181."

On January 17, 2014, the court entered a "Final Judgment" in this case. The judgment states, in part, "the Petition of Latasha Winkfield as mother of Jahi McMath, a minor, is DENIED" and "the motions of petitioner that respondent perform or permit surgical procedures was DENIED as stated in the order dated January 17, 2014."

On Wednesday September 24, 2014, counsel for petitioner sent an email to the court that stated, in part, "From preliminary information I have received, to be soon verified, I believe that I will be asking the court to reverse its ruling on brain death."

On Tuesday, September 30, 2014, the court held a case management conference to discuss procedural matters. On Wednesday, October 1, 2014, the court entered a written order that set a briefing schedule for any motion or application that petitioner might bring and outlined the court's procedural concerns.

On Friday, October 3, 2014, Petitioner filed a petition for a writ or error coram nobis. The hearing was scheduled for Thursday, October 9, 2014.

On Monday, October 6, 2014, the court entered an order appointing Paul Fisher MD as the court's independent expert under Evidence Code 730. This order attached a letter from Dr. Fisher explaining his concerns with the evidence presented in support of the petition for a writ of error coram nobis.

On Wednesday, October 8, 2014, Petitioner filed an objection to the court's order appointing Paul Fisher MD as the court's independent expert and separately filed a notice of motion to continue the hearing set for Thursday, October 9, 2014.

On Wednesday, October 8, 2014, Petitioner sent an email to the court at 9:57 am stating:

> Counsel;
>
> It is my intention to try and take the hearing on the Writ off calendar for tomorrow and re-file it, requesting a hearing date of November 14. This will give every party ample time to brief the very complex issues in this matter.

On Wednesday, October 8, 2014, court staff sent an email to counsel at 10:21 am stating:

> Counsel,
>
> Regarding Mr. Dolan's recent email, I have conferred with Judge Grillo. He states:
>
> 1. Petitioner may unilaterally DROP the pending petition/motion. This will take the matter off the court's calendar.
> 2. Petitioner may seek to CONTINUE the pending petition/motion. This will require consent of the parties or an order of the court. If the parties agree to a continuance the court will continue the pending petition/motion. If the parties do not agree to a continuance then the pending petition/motion will remain on calendar for 10/9/14 and the court will hear petitioner's request for a continuance that that time.
> 3. Petitioner must inform the parties and the court as soon as possible whether petitioner wants to DROP or to CONTINUE the pending petition/motion. The other parties do not need to filed their briefs (scheduled to be due today at 12:00 noon) until after petitioner makes that decision.

On Wednesday, October 8, 2014, Petitioner sent an email to the court at 11:04 am stating:

> Although Petitioner is withdrawing its petition/motion, we request that the Court convene with the parties at the scheduled time tomorrow for the limited purpose of discussing if the various medial experts can communicate with Dr. Fisher to discuss his findings and concerns.
>
> Given that Dr. Fisher is the Court appointed expert, Petitioner requests permission from the Court to allow the various experts to contact Dr. Fisher.

On Wednesday, October 8, 2014, court staff sent an email to counsel at 12:10 pm stating:

> Counsel,
>
> I have conferred with Judge Grillo.
> The court will, at petitioner's request, drop petitioner's motion set for 10/9/14.
> The court will not hold a CMC in this case on 10/9/14.
> If petitioner elects to seek relief in this case, then petitioner may request a CMC at a later date in this case. At any such CMC the court will decide whether to set the matter for further hearing and set any briefing schedule.
> If petitioner elects to file a different case, then any CMC regarding proceedings in that case should be held in that case.
> The court notes that if petitioner elects to file a different case, then petitioner must file a notice of related case informing the court of this case. CRC 3.300.

All of the above emails were copied to all counsel in this case, including counsel for interested non-parties the Alameda County Coroner or the California Department of Public Health.

ORDER.

The court issues this order to confirm the decisions made in the above email communications with counsel.

Petitioner withdrew the petition set for 10/9/14. The court will, at petitioner's request, drop that hearing.

The court will not hold a CMC in this case on 10/9/14. If petitioner elects to seek relief in this case, then petitioner may request a CMC at a later date in this case. At any such CMC the court will decide whether to set the matter for further hearing and set any briefing schedule.

If petitioner elects to file a different case, then any CMC regarding proceedings in that case should be held in that case.

If petitioner elects to file a different case, then petitioner must file a notice of related case informing the court of this case. (CRC 3.300.)

Dated: October 8, 2014

Evelio Grillo
Judge of the Superior Court

SUPERIOR COURT OF CALIFORNIA
COUNTY OF ALAMEDA

Case Number: RP13707598

Case Name: Winkfield vs. Children's Hospital Oakland

1) CASE MANAGMENT ORDER 1) CONFIRMING PETITIONER'S WITHDRAWL OF PETITION FOR WRIT OF ERROR CORAM NOBIS AND 2) STATING THERE WILL BE NO CMC ON FOR 10/9/2014

DECLARATION OF SERVICE BY MAIL

I certify that I am not a party to this cause and that a true and correct copy of the foregoing document was mailed first class, postage prepaid, in a sealed envelope, addressed as shown below by placing it for collection, stamping or metering with prepaid postage, and mailing on the date stated below, in the United States mail at Alameda County, California, following standard court practices.

I declare under penalty of perjury that the foregoing is true and correct. Executed on

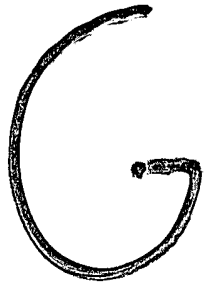
October 9, 2014

Executive Officer/Clerk of the Superior Court
By M. Scott Sanchez, Deputy Clerk

Douglas C. Straus
Brian W. Franklin
Noel M. Caughman
ARCHER NORRIS
A Professional Law Corporation 2033
North Main St., Suite 800
Walnut Creek, Ca. 94596-3759

David Nefouse
Andrea Weddle
Alameda County Sheriff's Office
Coroner's Bureau
480 4th Street
Oakland, CA 94607

Dolan, Christopher B.
The Dolan Law Firm
1438 Market Street
San Francisco, CA 94102



CERTIFICATION OF VITAL RECORD

OFFICE OF CLERK-RECORDER

COUNTY OF ALAMEDA

OAKLAND, CALIFORNIA

CERTIFICATE OF DEATH

STATE OF CALIFORNIA

USE BLACK INK ONLY / NO ERASURES, WHITEOUTS OR ALTERATIONS

VS-11 (REV 3/09)

3052013245211 — STATE FILE NUMBER

3201301008821 — LOCAL REGISTRATION NUMBER

DECEDENT'S PERSONAL DATA

1. NAME OF DECEDENT– FIRST (Given)	2. MIDDLE	3. LAST (Family)
JAHI	KELIS	MCMATH

AKA, ALSO KNOWN AS – Include full AKA (FIRST, MIDDLE, LAST)

4. DATE OF BIRTH mm/dd/ccyy	5. AGE Yrs.	If UNDER ONE YEAR: Months / Days	If UNDER 24 HOURS: Hours / Minutes	6. SEX
10/24/2000	13			F

9. BIRTH STATE/FOREIGN COUNTRY	10. SOCIAL SECURITY NUMBER	11. EVER IN U.S. ARMED FORCES?	12. MARITAL STATUS/RDP* (at time of death)	7. DATE OF DEATH mm/dd/ccyy	8. HOUR (24 Hours)
CA	[redacted]	YES [ ] NO [X] UNK [ ]	NEVER MARRIED	12/12/2013	1500

13. EDUCATION – Highest Level/Degree (see worksheet on back)	14/15. WAS DECEDENT HISPANIC/LATINO/A/SPANISH? (If yes, see worksheet on back)	16. DECEDENT'S RACE – Up to 3 races may be listed (see worksheet on back)
07	YES [ ] NO [X]	AFRICAN AMERICAN

17. USUAL OCCUPATION – Type of work for most of life. DO NOT USE RETIRED	18. KIND OF BUSINESS OR INDUSTRY (e.g., grocery store, road construction, employment agency, etc.)	19. YEARS IN OCCUPATION
STUDENT	E.C. REEMS ACADEMY	7

USUAL RESIDENCE

20. DECEDENT'S RESIDENCE (Street and number, or location)	21. CITY	22. COUNTY/PROVINCE	23. ZIP CODE	24. YEARS IN COUNTY	25. STATE/FOREIGN COUNTRY
2742 75TH AVE	OAKLAND	ALAMEDA	94605	13	CA

INFORMANT

26. INFORMANT'S NAME, RELATIONSHIP	27. INFORMANT'S MAILING ADDRESS (Street and number, or rural route number, city or town, state and zip)
NAILAH WINKFIELD, MOTHER	2742 75TH, OAKLAND, CA 94605

SPOUSE/RDP AND PARENT INFORMATION

28. NAME OF SURVIVING SPOUSE/RDP*–FIRST	29. MIDDLE	30. LAST (BIRTH NAME)	
-	-	-	
31. NAME OF FATHER/PARENT–FIRST	**32. MIDDLE**	**33. LAST**	**34. BIRTH STATE**
MILTON	DELMAR	MCMATH	MI
35. NAME OF MOTHER/PARENT–FIRST	**36. MIDDLE**	**37. LAST (BIRTH NAME)**	**38. BIRTH STATE**
LATASHA	NAILAH	SPEARS	CA

FUNERAL DIRECTOR/ LOCAL REGISTRAR

39. DISPOSITION DATE mm/dd/ccyy	40. PLACE OF FINAL DISPOSITION	
01/06/2014	UNKNOWN	3237 ARNOLD AVE, SALINA, KS 67401

41. TYPE OF DISPOSITION(S)	42. SIGNATURE OF EMBALMER	43. LICENSE NUMBER
REMOVAL	NOT EMBALMED	-

44. NAME OF FUNERAL ESTABLISHMENT	45. LICENSE NUMBER	46. SIGNATURE OF LOCAL REGISTRAR	47. DATE mm/dd/ccyy
LATASHA SPEARS-WINKFELD	NONE	MUNTU DAVIS, M.D.	01/03/2014

PLACE OF DEATH

101. PLACE OF DEATH	102. IF HOSPITAL, SPECIFY ONE	103. IF OTHER THAN HOSPITAL, SPECIFY ONE
CHILDREN'S HOSPITAL	[X] ER/OP [ ] DOA	[ ] Hospice [ ] Nursing Home/LTC [ ] Decedent's Home [ ] Other

104. COUNTY	105. FACILITY ADDRESS OR LOCATION WHERE FOUND (Street and number, or location)	106. CITY
ALAMEDA	747 52ND STREET	OAKLAND

CAUSE OF DEATH

107. CAUSE OF DEATH — Enter the chain of events — diseases, injuries, or complications — that directly caused death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE.

		Time Interval Between Onset and Death	108. DEATH REPORTED TO CORONER?
IMMEDIATE CAUSE (Final disease or condition resulting in death)	(A) PENDING INVESTIGATION	(A1) INVS	[X] YES [ ] NO
Sequentially list conditions, if any, leading to cause on Line A. Enter UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST	(B)	(B1)	109. BIOPSY PERFORMED? [ ] YES [X] NO
	(C)	(C1)	110. AUTOPSY PERFORMED? [ ] YES [X] NO
	(D)	(D1)	111. USED IN DETERMINING CAUSE? [ ] YES [ ] NO

REFERRAL NUMBER: 2013-03628

112. OTHER SIGNIFICANT CONDITIONS CONTRIBUTING TO DEATH BUT NOT RESULTING IN THE UNDERLYING CAUSE GIVEN IN 107: NONE

113. WAS OPERATION PERFORMED FOR ANY CONDITION IN ITEM 107 OR 112? (If yes, list type of operation and date.)	113A. IF FEMALE, PREGNANT IN LAST YEAR?
NO	[ ] YES [X] NO [ ] UNK

PHYSICIAN'S CERTIFICATION

114. I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE DEATH OCCURRED AT THE HOUR, DATE, AND PLACE STATED FROM THE CAUSES STATED. Decedent Attended Since / Decedent Last Seen Alive	115. SIGNATURE AND TITLE OF CERTIFIER	116. LICENSE NUMBER	117. DATE mm/dd/ccyy
(A) mm/dd/ccyy (B) mm/dd/ccyy	116. TYPE ATTENDING PHYSICIAN'S NAME, MAILING ADDRESS, ZIP CODE		

CORONER'S USE ONLY

118. I CERTIFY THAT IN MY OPINION DEATH OCCURRED AT THE HOUR, DATE, AND PLACE STATED FROM THE CAUSES STATED. MANNER OF DEATH: [ ] Natural [ ] Accident [ ] Homicide [ ] Suicide [X] Pending investigation [ ] Could not be determined.	120. INJURED AT WORK? [ ] YES [X] NO [ ] UNK	121. INJURY DATE mm/dd/ccyy	122. HOUR (24 Hours)

123. PLACE OF INJURY (e.g., home, construction site, wooded area, etc.)

124. DESCRIBE HOW INJURY OCCURRED (Events which resulted in injury)

125. LOCATION OF INJURY (Street and number, or location, and city, and zip)

126. SIGNATURE OF CORONER / DEPUTY CORONER	127. DATE mm/dd/ccyy	128. TYPE NAME, TITLE OF CORONER / DEPUTY CORONER
JESSICA D HORN	01/03/2014	JESSICA D HORN, DEPUTY CORONER

STATE REGISTRAR	A	B	C	D	E		FAX AUTH.#	CENSUS TRACT
						01000100253290		

002357979

CERTIFIED COPY OF VITAL RECORD
STATE OF CALIFORNIA, COUNTY OF ALAMEDA

00235797 9

This is a true and exact reproduction of the document officially registered and placed on file in the office of the Alameda County Clerk-Recorder.

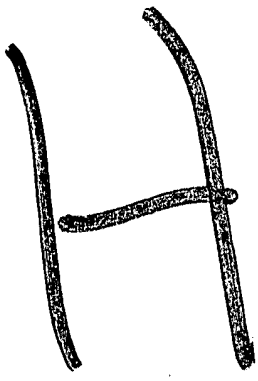
DATE ISSUED JAN 13 2014

PATRICK O'CONNELL
ALAMEDA COUNTY CLERK-RECORDER

This copy is not valid unless prepared on an engraved border displaying the date, seal and signature of the Clerk-Recorder.

EXHIBIT G

INFORMATIONAL - NOT A VALID DOCUMENT TO ESTABLISH IDENTITY



UNIFORM LAWS ANNOTATED

Volume 12A

Civil Procedural and Remedial Laws

With
Annotations From State and Federal Courts

THOMSON
WEST

Mat #40575068

EXHIBIT H

UNIFORM DETERMINATION OF DEATH ACT

1980 ACT

Table of Jurisdictions Wherein Act Has Been Adopted

Jurisdiction	Laws	Effective Date	Statutory Citation
Alabama	2000 Act No. 710	7-1-2000	Code 1975, §§ 22-31-1, 22-31-2.
Arkansas	1985, No. 386		A.C.A. § 20-17-101.
California	L.1982, c. 810	9-7-1982 *	West's Ann.Cal.Health & Safety Code, § 7180.
Colorado	1981, p. 778, § 1		West's C.R.S.A. § 12-36-136.
Delaware	65 Del.Laws, c. 237	2-5-1986	24 Del.C. § 1760.
District of Columbia	1982, D.C.Law 4-68	2-25-1982 *	D.C. Official Code, 2001 Ed. § 7-601.
Georgia	1982, pp. 723, 749		O.C.G.A. § 31-10-16.
Idaho	1981, c. 258		I.C. § 54-1819.
Indiana	1986, S.B.282	3-3-1986	West's A.I.C. 1-1-4-3.
Kansas	1984, c. 345	7-1-1984	K.S.A. 77-204 to 77-206.
Maine	1983, c. 33	3-7-1983 *	22 M.R.S.A. §§ 2811 to 2813.
Maryland	1982, c. 327	7-1-1982	Code, Health-General, § 5-202.
Michigan	1992, P.A. 90	6-4-1992 *	M.C.L.A. §§ 333.1031 to 333.1034.
Minnesota	1989, c. 93	5-9-1989 *	M.S.A. § 145.135.
Mississippi	1981, c. 410	3-24-1981	Code 1972, §§ 41-36-1, 41-36-3.
Missouri	1982, H.B. 1223	8-13-1982	V.A.M.S. § 194.005.
Montana	L.1983, c. 86		MCA § 50-22-101.
Nebraska	1992, LB 906	7-15-1992	R.R.S. 1943, §§ 71-7201 to 71-7203.
Nevada	1985, c. 62	3-30-1985 *	N.R.S. 451.007.
New Hampshire	1986, c. 191:1	7-1-1987	RSA 141-D:1 to 141-D:2.
New Mexico	1993, c. 174	7-1-1993	NMSA 1978 § 12-2-4.
North Dakota	1989, c. 308	7-12-1989	NDCC 23-06.3-01, 23-06.3-02.
Ohio	1982, S. 98	3-15-1982	R.C. § 2108.30.
Oklahoma	1986, c. 262	9-11-1986	63 Okl.St.Ann. §§ 3121 to 3123.
Oregon	1987, c. 517	7-8-1987 *	ORS 432.300.
Pennsylvania	Act 1982, No. 323	2-15-1983	35 P.S. §§ 10201 to 10203.
Rhode Island	1982, c. 411		Gen.Laws 1956, § 23-4-16.
South Carolina	1984, No. 339		Code 1976, §§ 44-43-450, 44-43-460.
South Dakota	1990, c. 273		SDCL 34-25-18.1.
Utah	1989, c. 276	4-24-1989	U.C.A.1953, 26-34-1, 26-34-2.
Vermont	1981, No. 62	4-30-1981	18 V.S.A. § 5218.
Virgin Islands	1993, Act No. 5894, § 2	10-13-1993	19 V.I.C. § 869.
West Virginia	1989, c. 206		Code, 16-10-1 to 16-10-4.
Wyoming	1985, c. 223	5-23-1985	Wyo.Stat.Ann. §§ 35-19-101 to 35-19-103.

* Date of approval.

Historical Notes

The Uniform Determination of Death Act was approved by the National Conference of Commissioners on Uniform State Laws in August 1980. It supersedes the Uniform Brain Death Act approved by the Commissioners in 1978.

Committees

The Committee which acted for the National Conference of Commissioners on Uniform State Laws in preparing the Uniform Determination of Death Act was as follows:

George C. Keely, 1600 Colorado National Building, 950 Seventeenth Street, Denver, CO 80202, *Chairman*

Anne McGill Gorsuch, 243 South Fairfax, Denver, CO 80222

John M. McCabe, Room 510, 645 North Michigan Avenue, Chicago, IL 60611, *Legal Counsel*

William H. Wood, 208 Walnut Street, Harrisburg, PA 17108

John C. Deacon, P.O. Box 1245, Jonesboro, AR 72401, *President, Ex Officio*

M. King Hill, Jr., 6th Floor, 100 Light Street, Baltimore, MD 21202, *Chairman, Executive Committee, Ex Officio*

William J. Pierce, University of Michigan, School of Law, Ann Arbor, MI 48109, *Executive Director, Ex Officio*

Peter F. Langrock, P.O. Drawer 351, Middlebury, VT 05753, *Chairman, Division E, Ex Officio*

Prefatory Note

This Act provides comprehensive bases for determining death in all situations. It is based on a ten-year evolution of statutory language on this subject. The first statute passed in Kansas in 1970. In 1972, Professor Alexander Capron and Dr. Leon Kass refined the concept further in "A Statutory Definition of the Standards for Determining Human Death: An Appraisal and a Proposal," 121 Pa.L.Rev. 87. In 1975, the Law and Medicine Committee of the American Bar Association (ABA) drafted a Model Definition of Death Act. In 1978, the National Conference of Commissioners on Uniform State Laws (NCCUSL) completed the Uniform Brain Death Act. It was based on the prior work of the ABA. In 1979, the American Medical Association (AMA) created its own Model Determination of Death statute. In the meantime, some twenty-five state legislatures adopted statutes based on one or another of the existing models.

The interest in these statutes arises from modern advances in lifesaving technology. A person may be artificially supported for respiration and circulation after all brain functions cease irreversibly. The medical profession, also, has developed techniques for determining loss of brain functions while cardiorespiratory support is administered. At the same time, the common law definition of death cannot assure recognition of these techniques. The common law standard for determining death is the cessation of all vital functions, traditionally demonstrated by "an absence of spontaneous respiratory and cardiac functions." There is, then, a potential disparity between current and accepted biomedical practice and the common law.

The proliferation of model acts and uniform acts, while indicating a legislative need, also may be confusing. All existing acts have the same principal goal—extension of the common law to include the new techniques for determination of death. With no essential disagreement on policy, the associations which have drafted statutes met to find common language. This Act contains that common language, and is the result of agreement between the ABA, AMA, and NCCUSL.

Part (1) codifies the existing common law basis for determining death—total failure of the cardiorespiratory system. Part (2) extends the common law to include the new procedures for determination of death based upon irreversible

loss of all brain functions. The overwhelming majority of cases will continue to be determined according to part (1). When artificial means of support preclude a determination under part (1), the Act recognizes that death can be determined by the alternative procedures.

Under part (2), the entire brain must cease to function irreversibly. The "entire brain" includes the brain stem, as well as the neocortex. The concept of "entire brain" distinguishes determination of death under this Act from "neocortical death" or "persistent vegetative state." These are not deemed valid medical or legal bases for determining death.

This Act also does not concern itself with living wills, death with dignity, euthanasia, rules on death certificates, maintaining life support beyond brain death in cases of pregnant women or of organ donors, and protection for the dead body. These subjects are left to other law.

This Act is silent on acceptable diagnostic tests and medical procedures. It sets the general legal standard for determining death, but not the medical criteria for doing so. The medical profession remains free to formulate acceptable medical practices and to utilize new biomedical knowledge, diagnostic tests, and equipment.

It is unnecessary for the Act to address specifically the liability of persons who make determinations. No person authorized by law to determine death, who makes such a determination in accordance with the Act, should, or will be, liable for damages in any civil action or subject to prosecution in any criminal proceeding for his acts or the acts of others based on that determination. No person who acts in good faith, in reliance on a determination of death, should, or will be, liable for damages in any civil action or subject to prosecution in any criminal proceeding for his acts. There is no need to deal with these issues in the text of this Act.

Time of death, also, is not specifically addressed. In those instances in which time of death affects legal rights, this Act states the bases for determining death. Time of death is a fact to be determined with all others in each individual case, and may be resolved, when in doubt, upon expert testimony before the appropriate court.

Finally, since this Act should apply to all situations, it should not be joined with the Uniform Anatomical Gift Act so that its application is limited to cases of organ donation.

General Statutory Note

ALABAMA

L.2000, No. 710, effective July 1, 2000, amended Code 1975, § 22-31-1, which formerly constituted a substantial adoption of the Uniform Brain Death Act, so that § 22-31-1, and the added section following, now constitute an adoption of the Uniform Determination of Death Act.

Adds a section, which provides:

"§ 22-31-2. Use of other methods.

"Nothing in this chapter shall prohibit a physician from using other procedures based on accepted medical standards for determining death as the exclusive basis for pronouncing a person dead."

MICHIGAN

Adds a section, which provides:

"333.1032. Definitions

"As used in this act:

"(a) 'Physician' means a person licensed as a physician under part 170 or part 175 of the public health code, Act No. 368 of the Public Acts of 1978, being sections 333.17001 to 333.17088 and 333.17501 to 333.17556 of the Michigan Compiled Laws.

"(b) 'Registered nurse' means a person licensed as a registered professional nurse under part 172 of the public health code, Act No. 368 of the Public Acts of 1978, being sections 333.17201 to 333.17242 of the Michigan Compiled Laws."

UNIFORM DETERMINATION OF DEATH ACT

1980 ACT

Section
1. [Determination of Death].
2. [Uniformity of Construction and Application].
3. [Short Title].

§ 1. [Determination of Death].

An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead. A determination of death must be made in accordance with accepted medical standards.

Action in Adopting Jurisdictions

Variations from Official Text:

ALABAMA

In the first sentence inserts ", in the opinion of a medical doctor licensed in Alabama," following "individual who".

COLORADO

Section provides:

"(1) An individual is dead if:

"(a) He has sustained irreversible cessation of circulatory and respiratory functions; or

"(b) He has sustained irreversible cessation of all functions of the entire brain, including the brain stem.

"(2) A determination of death under this section shall be in accordance with accepted medical standards."

DELAWARE

Section provides:

"(a) An individual who has sustained either:

"(1) Irreversible cessation of circulatory and respiratory functions or

"(2) Irreversible cessation of all functions of the entire brain, including the brain stem,

"is dead. A determination of death pursuant to this section must be made in accordance with accepted medical standards.

"(b) A determination of death pursuant to this section may be made by a person certified to practice medicine under this chapter by either:

"(1) Personal examination of the individual believed to be dead; or

"(2) The use of information provided by an EMT-P (paramedic) using telemetric or transtelephonic means in accordance with protocols

Law Review and Journal Commentaries

All is well that ends well: Toward a policy of assisted rational suicide or merely enlightened self-determination? George P. Smith, II. 22 U.C.Davis L.Rev. 275 (1989).

Choosing life after death: Respecting religious beliefs and moral convictions in near death decisions. Charlotte K. Goldberg. 39 Syracuse L.Rev. 1197 (1988).

Concept of brain life: Shifting the abortion standard without imposing religious values. Joel R. Cornwell. 25 Duq.L.Rev. 471 (1987).

Defining death: Report on medical, legal and ethical issues in determination of death. 27 N.Y.L.Sch.L.Rev. 1273 (1982).

Importance of Being Dead: Non-Heart-Beating Organ Donation. Jerry Menikoff, M.D., J.D. 18 Issues in Law & Med. 3 (Summer 2002).

Is Organ Procurement Causing the Death of Patients? James M. DuBois, Ph.D., D.Sc. 18 Issues in Law & Med. 21 (Summer 2002).

Need for uniform law on determination of death. Morris B. Abram. 27 N.Y.L.Sch.L.Rev. 1187 (1982).

Persistent vegetative state: Medical, ethical, religious, economic and legal perspectives. John B. Oldershaw, Jeff Atkinson, Louis D. Boshes. 1 DePaul J. Health Care L. 495 (1997).

Library References

Death ⇐1.
Westlaw Topic No. 117.
C.J.S. Death §§ 1, 3.

Westlaw Electronic Research

See Westlaw Electronic Research Guide following the Preface.

Notes of Decisions

Generally 1

1. Generally

Benchmark for determining what constitutes "death" under Determination of Death Act is irreversible cessation of either respiratory and circulatory functions or brain functions. People v. Selwa, Mich.App.1995, 543 N.W.2d 321, 214 Mich.App. 451, appeal denied 557 N.W.2d 307, 453 Mich. 937. Death ⇐ 1

§ 2. [Uniformity of Construction and Application].

This Act shall be applied and construed to effectuate its general purpose to make uniform the law with respect to the subject of this Act among states enacting it.

Action in Adopting Jurisdictions

Variations from Official Text:

ALABAMA

The provisions of this section of the Uniform Act are set out in L.2000, No. 710, § 2.

OKLAHOMA

Adds a second paragraph, which provides:

"This act does not concern itself with living wills, death with dignity, euthanasia, rules on death certificates, maintaining life support beyond brain death in cases of pregnant women or of organ donors, and protection for the dead body."

§ 3. [Short Title].

This Act may be cited as the Uniform Determination of Death Act.