

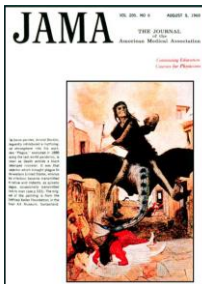
# Should the UDDA be Modified?

Thaddeus Mason Pope, JD, PhD, HEC-C  
Neubauer Collegium • March 25, 2021

1

# 1968

2



JAMA, Aug 5, 1968 • Vol 205, No 6

## A Definition of Irreversible Coma

Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death

3

“**No** statutory change in law ... necessary”

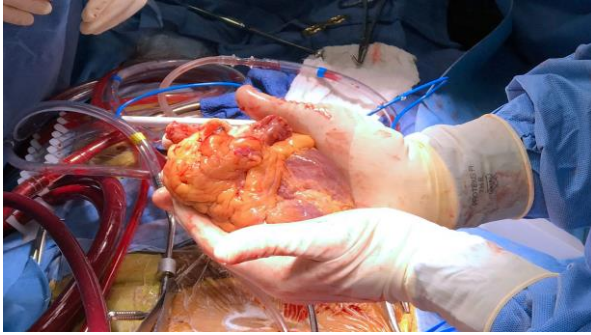
4

# Wrong

5



6



7

# Legislation Proposed to Recognize Brain Death

LOS ANGELES (PTS) — Proposed legislation recognizing so-called brain death will be drafted here, according to Dept. Dist. Atty. John W. to Miner. He said it will not define brain death.

The Los Angeles County district attorney's vital organ transplant committee decided

8

# BUT

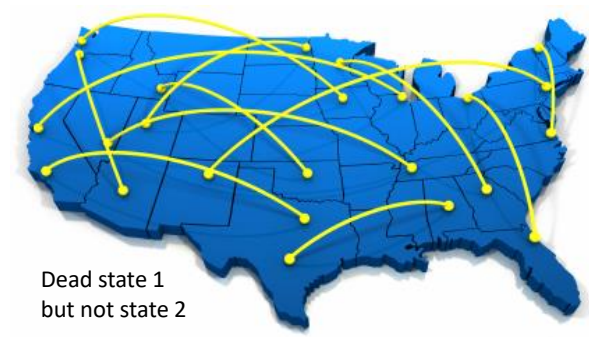
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10



11



12



Uniform Law Commission

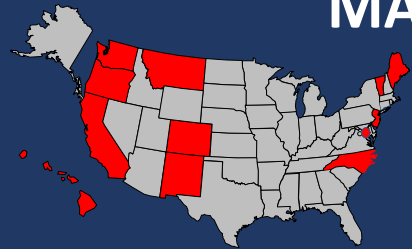
13

“status as alive or dead should not depend on the **capricious** question of immediate locale”

14

Tolerate  
Encourage

15



16

BUT

17

**Death** is  
different

18

**Death** is more consequential

19

Medical

20

Treatment  
Organ D&T

21

Legal

22

**Insurance**

Health insurance stop  
Life insurance start

**Property**

inheritance, estate tax, probate

23

**Criminal**

murder v. battery

**Tort**

wrongful death v. med mal

24

Family

25

When  
to grieve  
to bury

26

Uniformity  
Clarity  
Certainty

27

1980

28

UDDA

29

There are  
**2 ways**  
to determine death

30

“irreversible cessation of  
**circulatory & respiratory**  
 functions”

31

*or*

32

“irreversible cessation  
 of all functions of  
 the entire **brain**”

33

focus on this

**2<sup>nd</sup>** newer  
 prong

34

Brain death

=

Death

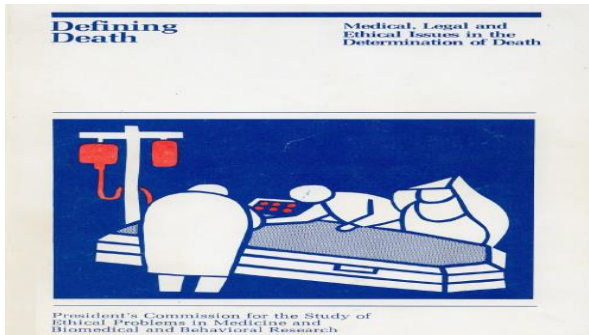
35

Total brain failure

=

Death

36



37

Eliminate 1970s  
variability

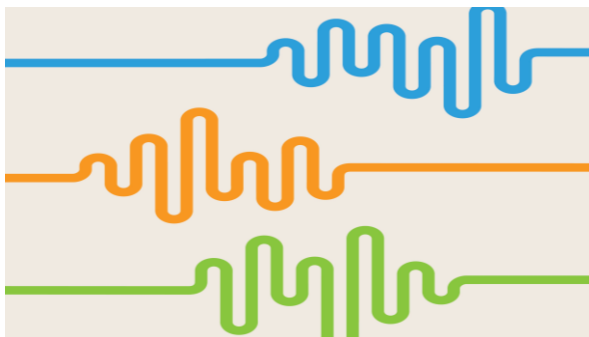
38

BUT

39



40



41

State 1  
≠  
State 2

42

Hospital 1  
 $\neq$   
 Hospital 2

43

MD 1  
 $\neq$   
 MD 2

44

Law  
 $\neq$   
 Practice

45

Uncertainty  
 Confusion  
 manifests

46



47

Roadmap

48



2 parts

49

4 Legal attacks

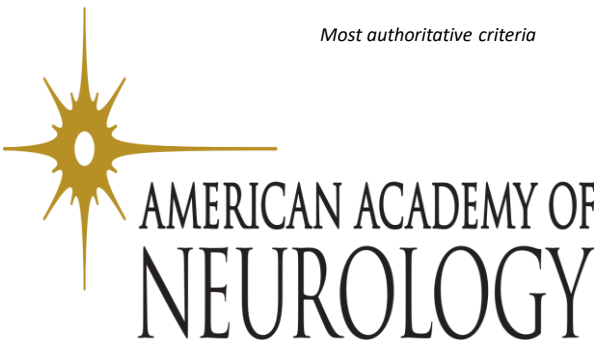
50

**R**UDDA

51

Attack 1

52



53

**AAN** does **not** measure what **UDDA** requires

54

### Session 3: Diagnosis of Death by Neurologic Criteria

Moderator: *Christos Lazgiris*

Here we will critically examine the adequacy and limitations (and how they could be addressed) of the currently proposed diagnostic criteria and tests for the determination of death by neurologic criteria. Is the whole brain death standard met when current clinical criteria are satisfied? Should we require a confirmatory study to document the cessation of cerebral blood flow? The American Academy of Neurology endorses the belief that preserved neuroendocrine function may be present despite irreversible injury of the cerebral hemispheres and brainstem, without this being inconsistent with the whole brain standard of death. Is this a valid position?

Ariane Lewis: Clinical Assessment Is the Gold Standard

Ari Joffe: What Is Wrong With Current Diagnostic Criteria?

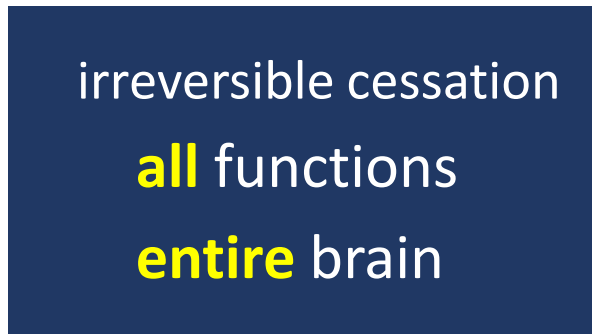
Alan Shewmon: The Case of Jahi McMath

Fernando Goldenberg: Clinical Testing Is Insufficient

55



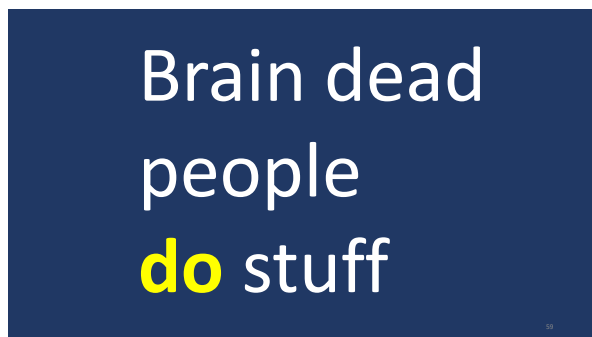
56



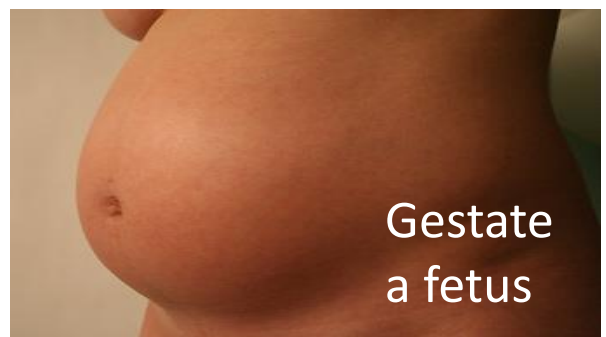
57



58



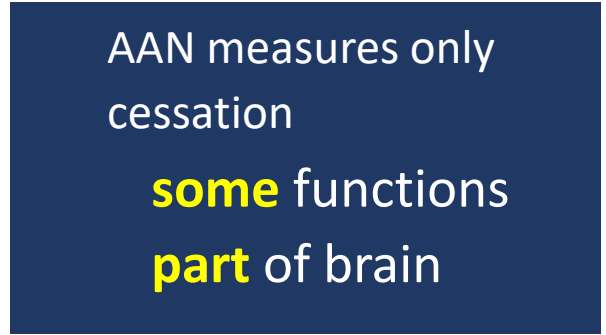
59



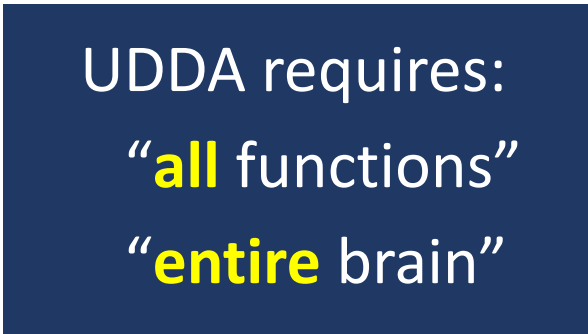
60



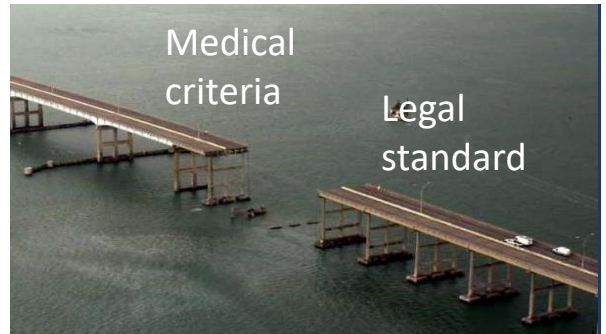
61



62



63



64



65

**SPECIAL ARTICLE**

## Brain death, the determination of brain death, and member guidance for brain death accommodation requests

AAN position statement

James A. Russell, DO, MS, Leon G. Epstein, MD, David M. Greer, MD, MA, Matthew Kirschen, MD, PhD, Michael A. Rubin, MD, MA, and Ariane Lewis, MD, on behalf of the Brain Death Working Group

**Correspondence**  
J.A. Russell  
james.a.russell@lahey.org

*Neurology*® 2019;92:1-5. doi:10.1212/WNL.0000000000006750

66

Patient can  
**satisfy** BD  
guidelines

67

Dead

68

Yet...

69

“neuro-endocrine  
function **may be  
present**”

70

Okay to declare dead  
**despite** functions of  
pituitary gland &  
hypothalamus

71

“**not inconsistent**  
with the whole brain  
standard of death.”

72

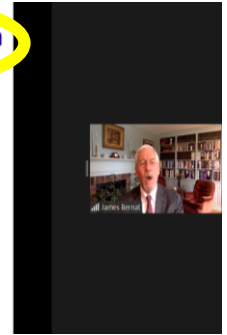


73

Reduction (Criterion-Test Mismatch)

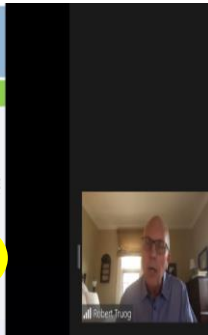
- Tighten the whole-brain tests
  - Requires *validated* imaging test showing complete cessation of intracranial blood flow
  - Current radionuclide blood flow tests may be insensitive in detecting slight blood flow in the posterior circulation (causing Coimbra's reversible *ischemic penumbra*)
- Loosen the whole-brain criterion
  - Change the prevailing whole-brain criterion to the brain-as-a-whole criterion, analogous to how the organism as a whole relates to the whole organism

Bernat JL, Dalle Ave AL. *Cambr Q Healthc Ethics* 2019;28:635-641



74

Definition of Death	Criteria for Diagnosis	Tests for Diagnosis
Bernat, 1981 "We define death as the permanent cessation of functioning of the organism as a whole"	UDDA, 1981: (1) Irreversible cessation of circulatory and respiratory functions (2) Irreversible cessation of all functions of the entire brain, including the brainstem	(1) Permanent cardiorespiratory arrest (2) AAN Guidelines

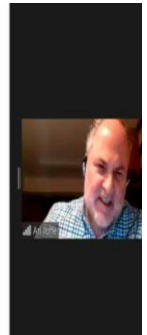


75

Epistemic Problem 1

The tests for BD do not diagnose a state of "irreversible loss of all brain functions":

- EEG activity: ~5%
- Brainstem auditory and/or SSEP activity: ~5%
- Hypothalamic functions [ongoing ADH regulation of fluid and electrolytes, temperature regulation, hemodynamic stability, puberty]: >50%
- Hemodynamic and endocrine stress response to incision for organ procurement: >20%
- Ability to breathe at PaCO2 >60 mmHg: several case reports
- Other functions in case reports: Cushing reflex [vasomotor brainstem function]; oculo-cardiac reflex [pons/medulla]; lacrimation [VII nerve]



76

**A Framework for Revisiting Brain Death: Evaluating Awareness and Attitudes Toward the Neuroscientific and Ethical Debate Around the American Academy of Neurology Brain Death Criteria**

Krishanu Chatterjee, BA<sup>1</sup>,  
Mohamed Y. Rady, BChir, MB (Cantab), MA, MD (Cantab)<sup>2</sup>,  
Joseph L. Verheijde, PhD, MBA, PT<sup>3</sup>, and Richard J. Butterfield, MA<sup>4</sup>

Journal of Intensive Care Medicine  
1-18  
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DOI: 10.1177/0885066620985827  
journals.sagepub.com/home/jic  
SAGE

I believe a positive result upon performing the AAN protocol demonstrates loss of all functions of the entire brain	4 (4.0%)	2 (3.9%)	4 (6.7%)
Strongly Disagree	23 (22.8%)	14 (27.5%)	28 (46.7%)
Disagree	30 (29.7%)	14 (27.5%)	11 (18.3%)
Neither Agree nor Disagree	30 (29.7%)	16 (31.4%)	11 (18.3%)
Agree	14 (13.9%)	5 (9.8%)	6 (10.0%)
Strongly Agree			

< 1/3 200 Mayo clinicians agree

77

78

Legal & public  
trust problem

79

UDDA

requires

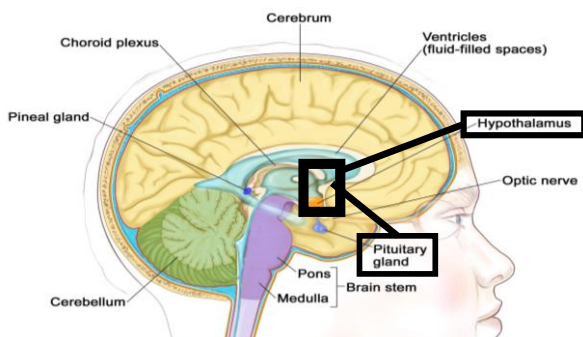
80

irreversible  
cessation of

81

“**all** functions”  
*of the*  
“**entire** brain”

82



83

Medically dead



Legally dead

84

Medical criteria  
do not require  
cessation of  
**all** functions

85

Require cessation  
of **critical** functions

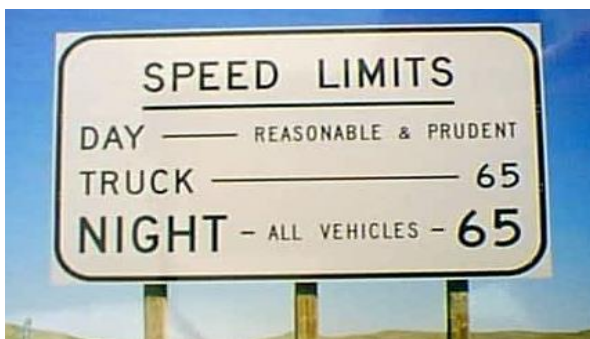
86



87

**Lack** authority  
to do that

88



89



90

Attack 1

**Mismatch**

Med – Leg

91

**Attack 2**

92

**Which** guidelines  
should clinicians use  
to determine BD?

93

**UDDA**

94

“must be made in  
accordance with  
**accepted medical  
standards**”

95

**BUT**

96



# variability

97



Research

Original Investigation

## Variability of Brain Death Policies in the United States

David M. Greer, MD, MA; Hilary H. Wang, BA; Jennifer D. Robinson, APRN; Panayiotis N. Varelas, MD, PhD; Galen V. Henderson, MD; Eelco F. M. Wijdicks, MD, PhD

98

Improving uniformity in brain death determination policies over time

OPEN

Hilary H. Wang, MD ABSTRACT

99

Variability of brain death determination guidelines in leading US neurologic institutions

David M. Greer, MB, MA; Panayiotis N. Varelas, MD, PhD

**ABSTRACT**  
 Background: In accordance with the Uniform Determination of Death Act, guidelines for brain death determination are developed at an institutional level, potentially leading to variability of practice. We evaluated the differences in brain death guidelines in major US hospitals with a

100

# Neurology®

February 26, 2019; 92 (9) ARTICLE

## Variability in reported physician practices for brain death determination

Sherri A. Braksick, Christopher P. Robinson, Gary S. Gronseth, Sara Hocker, Eelco F.M. Wijdicks, Alejandro A. Rabinstein

101

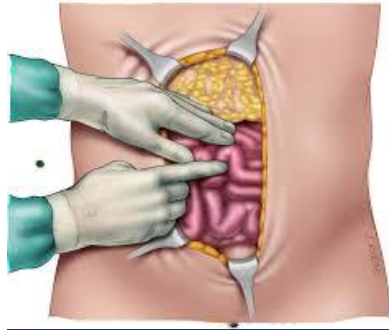


102



**Aden  
Hailu**

103

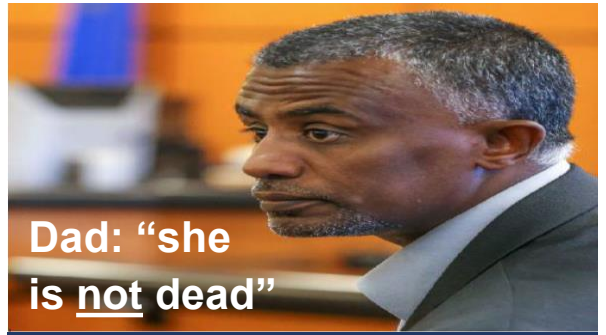


brain injury  
during  
exploratory  
laparotomy

104

**Met** AAN criteria  
for brain death

105



Dad: "she  
is not dead"

106



107

Dad  
loses

108

## Trial court

AAN criteria met  
→ Aden *is* dead

109



110

Dad  
**wins**

111



112

**Irrelevant** if Aden  
meets AAN criteria

**NOT** the  
“right” criteria

113

Unclear they are  
“**accepted** medical  
standards”  
as UDDA requires

114



Nevada  
A.B. 424 (2017)

115



New Jersey  
A.B. 3586 (2014)

116



H.B. 1896  
(2021)

OKLAHOMA

117

Attack 2  
**Which** medical standards

118

Attack 3

119

Want  
**religious** exemption

120

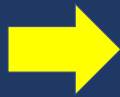


121

“[D]eath ... **shall not be declared** ... neurological ... violate ... **personal religious beliefs** . . . .”

122

Religious objection



No death by BD

123

Pt may

**satisfy**

BD criteria

124

**BUT**

125

May **not declare** death

126

**Until**  
death by  
CP criteria

127



128



129



130



131

Rejected  
**everywhere**  
outside NJ

132



133



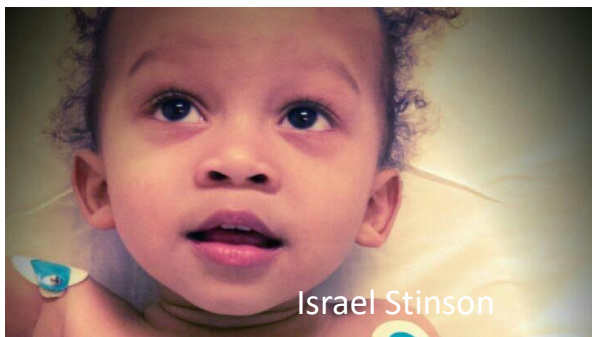
134



135



136



137



138

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF CALIFORNIA

Jonee Fonseca, an individual parent and guardian of Israel Stinson, a minor,	) Case No.: 2:16-cv-00889-KJM-EFB
Plaintiff,	)
v.	) Second Amended Complaint for Equitable Relief
Karen Smith, M.D. in her official capacity as Director of the California Department of Public Health; and Does 2 through 10, inclusive,	) REQUEST FOR JURY TRIAL
Defendant.	)

**Suing state  
of California**

139

“Plaintiffs are Christians  
with firm **religious  
beliefs** . . . heart is  
beating . . . is alive.”

140

“remove CP support ...  
**unconstitutional** ...  
interferes ...  
**freedom of religion**”

141



142

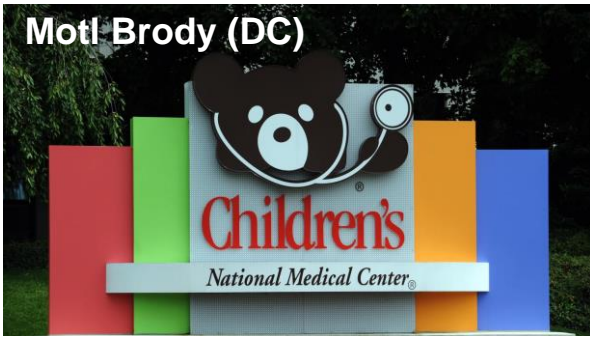


143



144





145



146



147



148



149



150

Will see **more**  
of these cases

151



152

Attack 3  
Religious  
exemption

153

**Attack 4**

154

Must clinicians  
get **consent**  
for BD tests?

155

Some try to  
**prevent**  
BD diagnosis

156

# Why?

this strategy

157

Clinician  
duties  
**after** BD

158

# Limited

159

No **post**-BD  
treatment rights

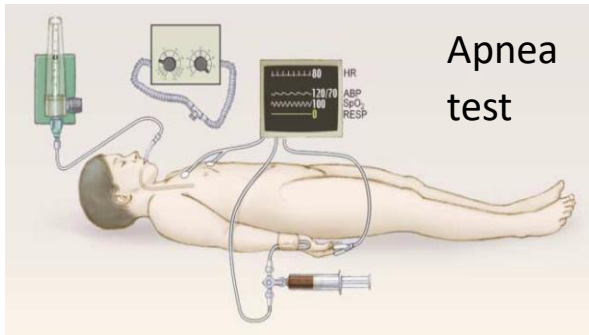
160

# So,

161

Focus on  
**pre-BD**  
rights

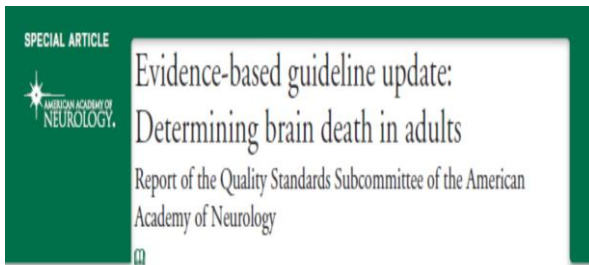
162



163

**Final**  
confirmatory test

164



Eelco F.M. Wijdicks, MD, PhD

**ABSTRACT**

**Objective:** To provide an update of the 1995 American Academy of Neurology guideline with regard

165



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

**abstract**

Thomas A. Nakagawa, MD, Stephen Ashwal, MD, Mudit

166

**BUT**

167

More family  
**refusals**

168



169

**Parental**  
refusals

170



171

No apnea test  
**↓**  
No BD

172

No BD  
**↓**  
Treatment duties  
continue until CP

173

**Opt out**  
BD

174

Practically, same  
as NJ religious  
**exemption**

175

NJ

Determine **YES**  
Declare **NO**

176

Here

Determine **NO**  
Declare **NO**

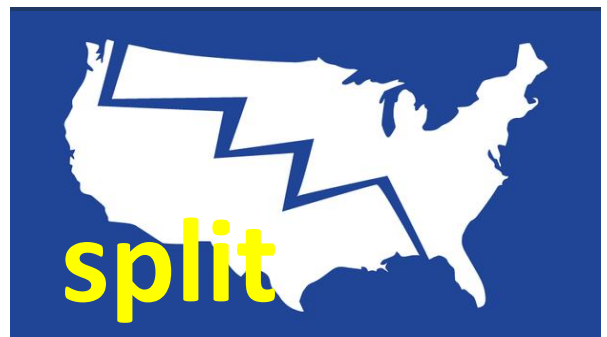
177

Must clinicians  
**honor** the  
refusal?

178

Do clinicians  
need **consent**  
for apnea test?

179



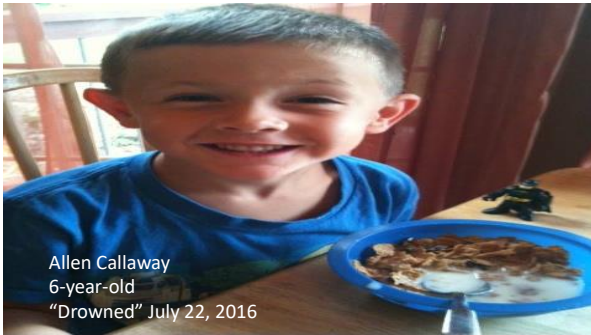
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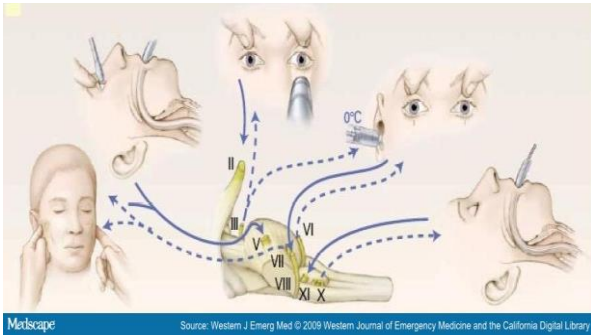
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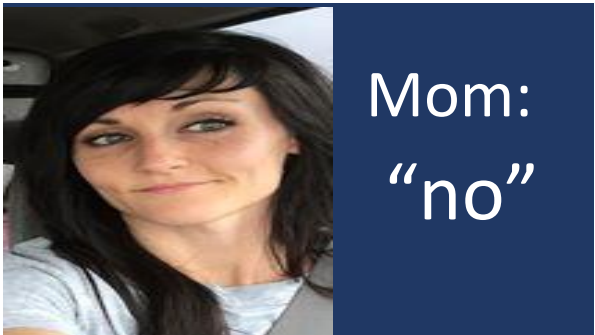
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184



185



186

## MONTANA NINTH JUDICIAL DISTRICT COURT, PONDERA COUNTY

IN THE MATTER OF THE  
GUARDIANSHIP OF A.C.,

**FILED**  
SEP 26 2016  
Sharon Keenan  
CLERK OF DISTRICT COURT  
PONDERA COUNTY, MONTANA

a minor.

Cause No. DG-16-08

FINDINGS OF FACT,  
CONCLUSIONS OF LAW AND  
ORDER

187

“no”

188

“request ...  
permitting ... testing  
... **is denied**”

189

“**mother has sole authority**  
to make medical decisions .  
. . . **including** . . . brain  
functionality examinations”

190

Do clinicians  
need **consent**  
for apnea test?

191

MT said  
“**yes**”

192



KS also  
"yes"

193



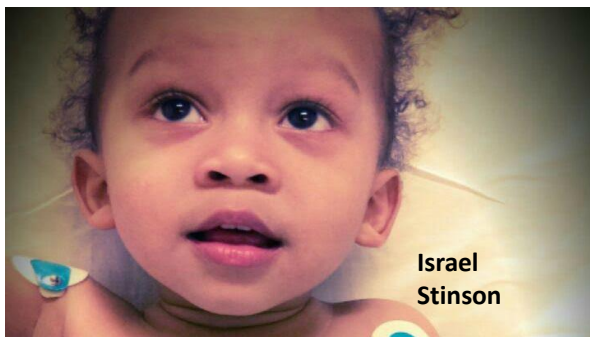
194

CA also  
"yes"

195



196



197

Do clinicians  
need **consent**  
for apnea test?

198

MT, KS, CA  
said “**yes**”

199

Plausible

200

Normally, may **not**  
do things to patient  
without **consent**

201



202

No

203



204



205



206



207



208

YES	NO
California	Georgia
Kansas	Nevada
Montana	New York
	Texas
	Virginia

209

Conflict continues

210

Attack 4

**Consent** for  
BD testing

211

**Recap**

212

**4** attacks →  
Variability  
Uncertainty

213

**U**DDA

214

**Response**

215



Uniform Law Commission

216

**R**UDDA

217

## Step 1

Appoint study  
committee

218

July 2020

219

## Step 2

Study committee  
deliberates

220

Ongoing  
now

221

## Step 3

Study committee  
**recommendation**

222

# July 2021

223

## Step 4

Appoint **drafting**  
committee

224

## Step 5

Drafting committee  
deliberates

225

1. Med-Leg “gap”
2. Accepted criteria
3. Consent required
4. Religious objections
- 5. Other**

226

## Step 6

Drafting committee  
submits draft

227

# July 2022

228

# Step 7

State legislatures

229

**Reduce**

variability

**Increase**

certainty & trust

230



## Nevada

A.B. 424 (2017)

231



**H.B. 1896  
(2021)**

**OKLAHOMA**

232

# Conclusion

233

# Variability

medical standards

234

# Mismatch

legal criteria to  
medical standards

235

More **conflict**  
& litigation

236

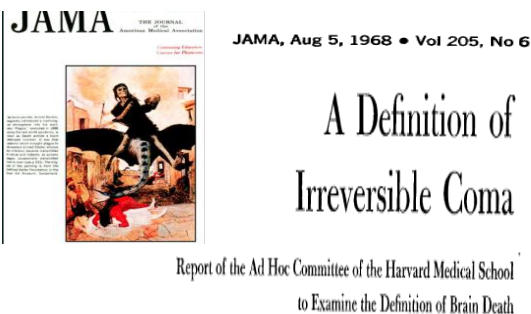
Public  
trust

237

[optn.transplant.hrsa.gov/data/view-data-reports/national-data](https://optn.transplant.hrsa.gov/data/view-data-reports/national-data)

	To Date	2020
All DCD + non-DCD	235,599	11,543
Brain Death Donor	184,232	8,616
DCD Donor	23,820	2,927

238



239

“**No** statutory  
change in law  
... necessary”

240



# qualified

241

The only circumstance in which it would be necessary that legislation be offered in the various states to define "death" by law would be in the event that great controversy were engendered surrounding the subject

242



243

# Life

# Death

244

# Life

# Death

245

# RUDDA

246

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W www.thaddeuspope.com

B medicalfutility.blogspot.com

247

# References

248

Materials from this  
presentation are available

<http://thaddeuspope.com/braindeath>

249

## Medical Futility Blog

Since July 2007, I have been blogging, almost daily, to [medicalfutility.blogspot.com](http://medicalfutility.blogspot.com). This blog focuses on reporting and discussing legislative, judicial, regulatory, medical, and other developments concerning medical futility and end-of-life medical treatment conflicts. The blog has received nearly **4 million** direct visits. Plus, it is distributed through RSS, email, Twitter, and re-publishers like WestlawNext and Bioethics.net.

250

*It's Time to Revise the Uniform Determination of Death Act*, 173(1) ANNALS OF INTERNAL MEDICINE 75-75 (2020).

*Revising the Uniform Determination of Death Act: Response to Miller and Nair-Collins*, HASTINGS BIOETHICS FORUM (January 29, 2020) (with Ariane Lewis and Richard J. Bonnie).

251

*Why Should We See Brain Death as Socially Situated?* 22(12) AMA JOURNAL OF ETHICS E983-985 (December 2020) (guest editor of issue with Ariane Lewis).

*Brain Death Testing: Time for National Uniformity*, 20(6) AMERICAN JOURNAL OF BIOETHICS 1-3 (2020).

252

Is There a Right to Delay Determination of Death by Neurologic Criteria? 77 JAMA NEUROLOGY (August 3, 2020) (with Ariane Lewis, and Richard J. Bonnie).

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253

It's Time to Revise the Uniform Determination of Death Act, 172(2) ANNALS OF INTERNAL MEDICINE 143-144 (2020) (with Ariane Lewis and Richard Bonnie).

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