

ETHICAL MATTERS



A Survey of Multidenominational Rabbis on Death by Neurologic Criteria

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Abstract

Objective: (1) Determine the pervasiveness of the belief that brain death/death by neurologic criteria (BD/DNC) is not death among rabbis. (2) Examine rabbinic beliefs about management after BD/DNC.

Methods: An electronic anonymous survey about BD/DNC determination and management after BD/DNC was created and distributed to members of the Central Conference of American Rabbis (the Reform Rabbinic leadership organization), the Rabbinic Council of America (an Orthodox organization), the Rabbinic Assembly (a Conservative organization), and the Reconstructionist Rabbinic Association.

Results: Ninety-nine rabbis (40 Reform, 32 Orthodox, 22 Conservative, and 5 Reconstructionist) completed the survey. Awareness of the requirements for BD/DNC was poor (median of 33% of the requirements correctly identified [interquartile range of 22–66%]), but 81% of rabbis knew that absence of heartbeat is not required for BD/DNC. Although only 5% of all rabbis believed a person who is brain dead could recover, 22% did not believe BD/DNC is death, and 18% believed mechanical ventilation should be continued after BD/DNC. There was a significant relationship between denomination and belief that: (1) a person who is brain dead can recover ($p = 0.04$); (2) a person who is brain dead is dead ($p < 0.001$); (3) mechanical ventilation should be continued after BD/DNC ($p < 0.001$); (4) hydration should be continued after BD/DNC ($p = 0.002$); (5) nutrition should be continued after BD/DNC ($p < 0.001$); (6) medications to support blood pressure should be continued after BD/DNC ($p < 0.001$); and (7) cardiopulmonary resuscitation should be performed when a brain dead person's heart stops ($p = 0.006$).

Conclusions: Rabbinic knowledge about the intricacies of BD determination is poor. Rabbinic perspectives on management after BD/DNC vary. These empirical data on rabbinic perspectives about BD/DNC may be helpful when considering accommodation of religious objections to BD/DNC.

Keywords: Brain death, Death, Jewish, Rabbi, Religion

Introduction

Although brain death/death by neurologic criteria (BD/DNC) has been accepted as legal death throughout the USA and much of the world since the publication of the 1968 Harvard report [1–3], debate persists among rabbinic authorities about whether or not to accept BD/DNC [4–13].

There is some mention of religious views on BD/DNC in the medical literature, but most papers about rabbinic perspectives on BD/DNC are in religious journals [5–11, 13–17]. This is problematic because 15–25% of providers who are involved in determination of BD/DNC have been confronted with religious objections to BD/DNC [16, 17]. Case studies on Jewish families that objected to BD/DNC or discontinuation of organ support after BD/DNC demonstrate that these objections create a number of medical, ethical, social, and emotional challenges for healthcare teams [18, 19]. Additionally, conflict has escalated outside of the hospital to both the court and the

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media [20–23]. These cases have prompted some to ask how the dichotomy between religious beliefs and secular law should be addressed [14–17, 19, 24–29].

Generating an informed opinion about this issue necessitates a better understanding of rabbinic perspectives on BD/DNC. Setta and Shemie note that Reform Jews (who are liberal proponents of individual autonomy and believe Judaism must adapt to present-day situations) and Conservative Jews (who believe that Jewish law is continuously developing) “overwhelmingly accept neurologic criteria” for death, whereas Orthodox Jews (who believe it is necessary to adhere to traditional Jewish law—halacha) have mixed views on BD/DNC [30]. Grodin and Nevins support these generalizations [6, 31].

However, there are no empirical data about contemporary rabbinic perspectives on BD/DNC. To remedy this, this study sought to determine the pervasiveness of the belief that BD/DNC is not death among rabbis and examine rabbinic beliefs about management after BD/DNC, with a particular focus on views by denomination.

Methods

Survey Creation

A survey was designed using Open RedCap (Research Electronic Data Capture, a secure, web-based application program) [32]. The goals of the survey were to (1) identify how well rabbis understand the medico-legal aspects of BD/DNC and (2) explore rabbinic perspectives about BD/DNC. The survey included three multiple-choice knowledge-based questions about BD/DNC and eight yes–no opinion-based questions addressing respondents’ beliefs about the meaning of BD/DNC and management after BD/DNC. Demographic data and information about the religious affiliation of respondents were also collected. At the end of the survey, there was an open-ended opportunity to provide other comments about BD/DNC. See Appendix 1.

Survey Distribution

In May and June 2018, the electronic survey was disseminated to members of the Central Conference of American Rabbis (the Reform Rabbinic leadership organization), the Rabbinic Council of America (an Orthodox organization), the Rabbinic Assembly (a Conservative organization), and the Reconstructionist Rabbinic Association. The Central Conference of American Rabbis posted a link to the survey on their Facebook page (which has 1414 members) and distributed it via one email (the listserv size is unknown). The Rabbinic Council of America sent a link to the survey to their listserv three times (the organization has 1000 members). The Rabbinic Assembly distributed a link to the survey once via email in June 2018 (the listserv size is unknown). The

Reconstructionist Rabbinic Association included a link to the survey in their newsletter twice (the newsletter goes to 380 rabbis).

Statistics

To test for differences between groups, the responses from Orthodox rabbis were compared to those from Conservative/Reconstructionist rabbis and Reform rabbis. Chi-square tests, likelihood ratios, and the independent samples Kruskal–Wallis test were used as appropriate. A regression likelihood ratio test was used to assess the impact of denomination, as compared with other demographic factors that had a significant relationship with denomination, on individual beliefs about BD/DNC. Data were analyzed using IBM SPSS Statistics version 25. A p value < 0.05 was considered statistically significant. The NYU Langone Medical Center IRB waived consent for this study.

Results

Respondents

The survey was completed by 99 rabbis (40 Reform, 32 Orthodox, 22 Conservative, and 5 Reconstructionist; 4% response rate), most of whom were men (78%), 51 to 70 years old (58%) and practiced at the pulpit (63%). There was a significantly lower percentage of female Orthodox rabbis versus Conservative/Reconstructionist and Reform rabbis (0% vs. 35% vs. 33%, respectively, $p < 0.001$). Reform rabbis were significantly older than Orthodox or Conservative/Reconstructionist rabbis ($p = 0.03$). The majority of Orthodox rabbis (56%) were from accommodation states (states where the law allows for accommodation of religious objections to the use of neurologic criteria to declare death: California, Illinois, New Jersey, and New York), [16] whereas the majority of Conservative/Reconstructionist rabbis (56%) and Reform rabbis (60%) were from non-accommodation states ($p = 0.03$). See further demographic data in Table 1.

Rabbinic Knowledge about BD/DNC

Awareness of the requirements for BD declaration was poor (median of 33% of the requirements correctly identified [interquartile range of 22–66%]), but 81% of rabbis knew that absence of heartbeat is not required for BD/DNC. However, nearly all rabbis (89%) were aware that BD/DNC is the medical and legal equivalent of cardiopulmonary death in the USA and 91% knew that organ support is routinely discontinued after BD/DNC. There was no significant difference between denominations in awareness of the requirements for BD/DNC or the medico-legal status of BD/DNC, but significantly more Orthodox rabbis knew that organ support is routinely

Table 1 Demographics of respondents

Characteristic	All rabbis (n = 99)	Orthodox rabbis (n = 32)	Conservative/Reconstructionist rabbis (n = 27)	Reform Rabbis (n = 40)	p value
Female ^a	21 (22%)	0	9 (35%)	13 (33%)	<0.001
Age ^b					0.03
≤ 40	13 (13%)	6 (19%)	6 (22%)	1 (3%)	
41–50	14 (14%)	7 (23%)	1 (4%)	6 (5%)	
51–60	28 (28%)	10 (31%)	8 (30%)	10 (25%)	
61–70	29 (30%)	6 (19%)	9 (33%)	14 (35%)	
≥ 71	14 (14%)	2 (6%)	3 (11%)	9 (23%)	
Location ^c					0.03
Outside of the USA	11 (12%)	5 (16%)	3 (12%)	3 (8%)	
USA—accommodation state	37 (39%)	18 (56%)	8 (30%)	11 (28%)	
USA—non-accommodation state	47 (50%)	8 (25%)	15 (56%)	24 (60%)	
Work setting					0.09
College campus	1 (1%)	0	1 (4%)	0	
Hospital chaplain	12 (12%)	7 (22%)	3 (11%)	2 (5%)	
Pulpit	62 (63%)	17 (53%)	15 (56%)	30 (75%)	
Social justice organization	2 (2%)	0	0	2 (5%)	
Other	22 (22%)	8 (25%)	8 (30%)	6 (15%)	

Statistically significant p values are given in bold

^a n = 97 for all rabbis, n = 26 for Conservative/Reconstructionist rabbis, and n = 39 for Reform rabbis

^b n = 98 for all rabbis and n = 31 for orthodox rabbis

^c n = 94 for all rabbis, n = 31 for Orthodox rabbis, n = 26 for Conservative/Reconstructionist rabbis, and n = 38 for Reform rabbis

Table 2 Rabbinical knowledge about brain death

Characteristic	All rabbis (n = 99)	Orthodox rabbis (n = 32)	Conservative/Reconstructionist rabbis (n = 27)	Reform rabbis (n = 40)	p value
Requirements for brain death declaration (median, IQR percentage of requirements correctly identified) ^{a,b}	33% (22–66%)	22% (11–88%)	44% (22–66%)	22% (22–55%)	0.12
Irreversible pathology	49 (49%)	13 (41%)	15 (56%)	21 (78%)	0.46
Absence of consciousness	39 (39%)	12 (38%)	13 (48%)	14 (35%)	0.54
Absence of purposeful movement	32 (32%)	10 (31%)	13 (48%)	9 (23%)	0.09
Absence of pupillary brainstem reflex	50 (51%)	13 (41%)	17 (63%)	20 (50%)	0.23
Absence of corneal reflex	35 (35%)	12 (38%)	13 (48%)	10 (25%)	0.14
Absence of oculocephalic and oculovestibular reflexes	34 (34%)	17 (53%)	9 (33%)	8 (20%)	0.01
Absence of a gag or cough reflex	28 (28%)	10 (31%)	9 (33%)	9 (23%)	0.57
Inability to breathe spontaneously when taken off the ventilator	40 (40%)	14 (44%)	11 (41%)	15 (38%)	0.87
Absence of heartbeat is not required	80 (81%)	25 (78%)	22 (81%)	33 (83%)	0.89
Brain death is the medical and legal equivalent of cardiopulmonary death throughout the USA	88 (89%)	31 (97%)	23 (85%)	34 (85%)	0.16
Organ support is routinely discontinued after declaration of brain death ^a	90 (91%)	31 (100%)	25 (93%)	34 (85%)	0.03

Statistically significant p values are given in bold

^a n = 98 for all rabbis and n = 31 for Orthodox rabbis

^b Declaration of brain death requires irreversible pathology and absence of consciousness/purposeful movements/all brainstem reflexes and inability to breathe spontaneously. Absence of heartbeat is not required

discontinued after BD/DNC than Conservative/Reconstructionist or Reform rabbis (100% vs. 93% vs. 85%, respectively, $p=0.03$). See Table 2.

Rabbinic Beliefs About BD/DNC

Although only 5% of all rabbis believed a person who is brain dead can recover, 22% did not believe BD/DNC is death, and 18% believed mechanical ventilation should be continued after BD/DNC. There was a significant relationship between denomination and belief that: (1) a person who is brain dead can recover ($p=0.04$);

(2) a person who is brain dead is dead ($p<0.001$); (3) mechanical ventilation should be continued after BD/DNC ($p<0.001$); (4) hydration should be continued after BD/DNC ($p=0.002$); (5) nutrition should be continued after BD/DNC ($p<0.001$); (6) medications to support blood pressure should be continued after BD/DNC ($p<0.001$); and (7) cardiopulmonary resuscitation should be performed when a brain dead person's heart stops ($p=0.006$). See Fig. 1. This relationship remained significant on regression analysis accounting for sex and age for all beliefs except the belief that (1)

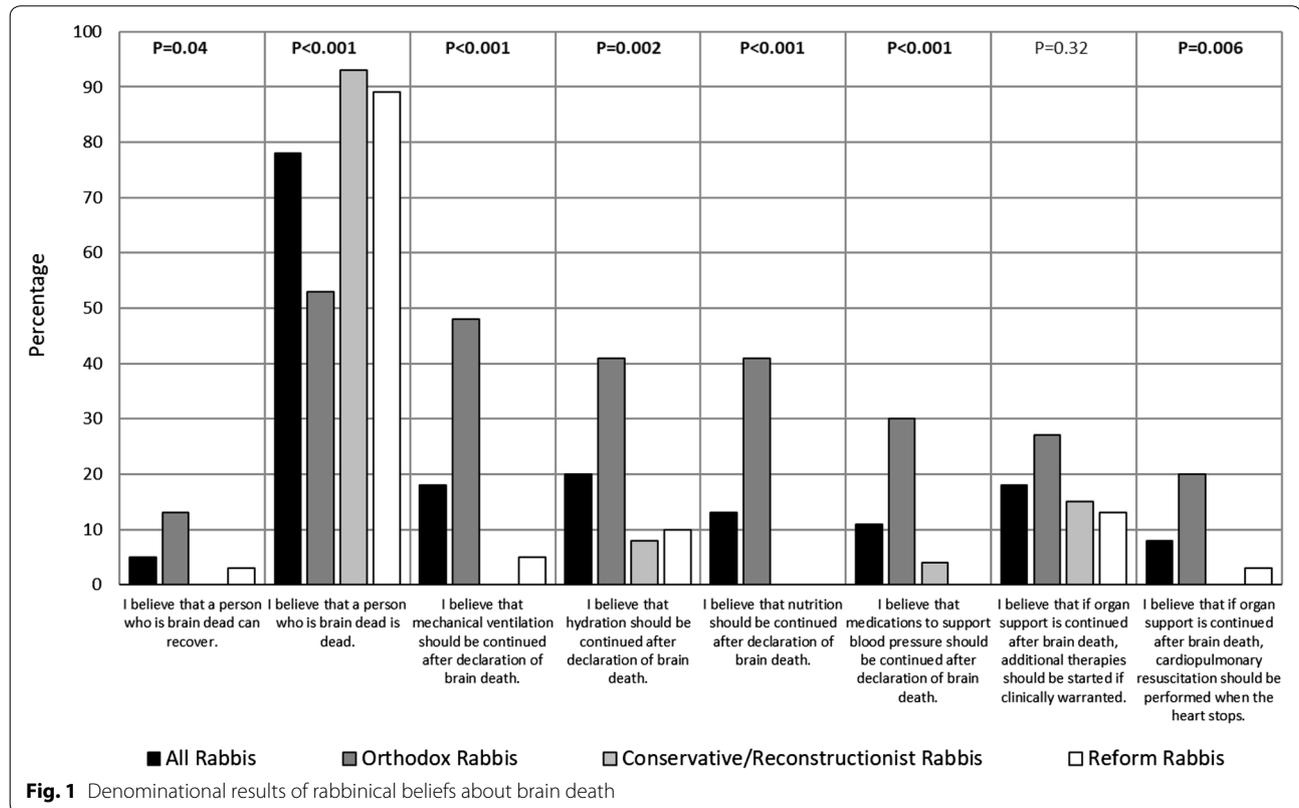


Table 3 Regression analysis of factors associated with rabbinical beliefs

Belief	Sex <i>p</i> value	Age <i>p</i> value	Denomination <i>p</i> value
A person who is brain dead can recover	0.36	0.9	0.15
A person who is brain dead is dead	0.62	0.005	0.02
Mechanical ventilation should be continued after declaration of brain death	0.69	0.21	<0.001
Hydration should be continued after declaration of brain death	0.22	0.27	0.06
Nutrition should be continued after declaration of brain death	1	0.26	<0.001
Medications to support blood pressure should be continued after declaration of brain death	0.26	0.17	0.01
If organ support is continued after brain death, cardiopulmonary resuscitation should be performed when the heart stops	0.36	0.68	0.03

Statistically significant *p* values are given in bold

a person who is brain dead can recover ($p=0.15$) and that (2) hydration should be continued after BD/DNC ($p=0.06$). See Table 3.

Rabbinic Free Text Comments About BD/DNC

Responses to the open-ended free response question about further comments on BD/DNC were analyzed by theme. Comments on the reliability of BD/DNC determinations, the implications of a BD/DNC determination and management after BD/DNC are included in Appendix 2. Regarding the reliability of BD/DNC determinations, three rabbis voiced concern about performance of determinations prematurely or inappropriately, while two noted that they trust physicians and ethicists to determine when BD/DNC has occurred. With respect to the question of whether BD/DNC is the death of a person, comments addressed both opposing views and the middle ground that the issue is “complex” and “inconclusive.” As for management after BD/DNC, a number of rabbis noted that the decision-making process about interventions after BD/DNC is “situational” and depends on “cultural, ethical [and] religious” considerations, that “wishes of the patient” and “a particular family’s needs” must be considered, and some even stated that the personal opinions of the rabbi were not relevant. However, four Reform rabbis firmly indicated disagreement with continuation of organ support after BD/DNC.

Of note, a number of respondents felt the format of the yes–no questions about their perspectives on BD/DNC was too simplistic and constrained them from adequately expressing their nuanced opinions which, some noted, could vary based on the details of a situation.

Additionally, a few rabbis were unclear about whether or not they should have taken the possibility of organ donation into consideration when responding to questions about management after BD/DNC.

Discussion

The results of the first empirical study on contemporary rabbinic perspectives about BD/DNC demonstrate that there is heterogeneity of opinions about BD/DNC both between and within Jewish denominations. Confluent with generalizations in the literature, beliefs about whether or not BD/DNC is death and management after BD/DNC varied the most among Orthodox rabbis, but neither Conservative/Reconstructionist rabbis nor Reform rabbis were 100% internally consistent in their views [6, 30, 31].

Sources of Rabbinic Knowledge/Beliefs About BD/DNC

To understand rabbinic perspectives about BD/DNC, it is necessary to consider discussions on death in classical

Jewish texts [12, 31]. Although there are numerous references to death in these writings, none provide a clear definition of death [31, 33]. However, there are two stories about death in Jewish doctrine that are frequently cited in discussions about defining death [5–8, 10, 12, 30, 33]. The takeaway points from these two stories vary [5–8, 10, 12, 30, 33], and it has been noted that they are “difficult to understand on terminological as well as interpretive grounds [33].”

The first story addresses how much work one should perform on the Sabbath to save a person being crushed by a building [6–8, 12, 33]. Those who believe BD/DNC is death explain the meaning of this story to be that death should be declared when absence of respiration through the nose is noted; those who believe death only occurs when the heart stops beating argue that the takeaway from this lesson is not the definition of death, but, rather, the need to make every effort to preserve life for even a very short period of time, as a single second of life and a hundred years of life are “equally precious [6–8, 12, 33].”

The second story notes that even if a decapitated animal moves its tail spasmodically, death has occurred [5, 8, 10, 30]. Those who believe BD/DNC is death categorize the ongoing heartbeat after BD/DNC as a spasmodic movement; however, others contend that physiological decapitation is different from anatomical decapitation, and that “cessation of circulation to the brain, cannot, in itself, be equated with total cellular destruction of the brain [10],” unless the brain is liquefied, and that a heartbeat is not a spasmodic movement [5, 6, 8, 10, 30].

Although some rabbinic scholars believe Jewish texts should not be questioned, others emphasize the need to (1) consider an author’s level of medical and scientific knowledge before relying on their writing to form opinions about BD/DNC, and (2) recognize that even if an author seems to possess scientific knowledge, a religious report about medical facts may not be “an unfettered presentation of the truth” and may “present only the facts supporting just one side of the debate [9, 33].” The rabbis who completed this survey were not asked about their interpretations of these stories or the extent to which their perspectives about BD/DNC were based on Jewish texts, though it would have been interesting to get their opinions. However, given that Orthodox Jews believe it is necessary to adhere to traditional Jewish law, it is likely many would have noted their perspectives are largely based on Jewish texts [30]. But this sentiment is not pervasive among all Orthodox Jews, as Rabbi Sheer, an Orthodox rabbi, boldly questions the authority of ancient religious texts in assessing contemporary scientific issues, asking, “What is the standing of such texts which, of necessity, reflect the wisdom of antiquity or the Middle Ages?” and going on to say, “I cannot imagine that

a physician in a modern hospital would turn to a seveneenth- or eighteenth-century medical work to diagnose a medical problem or to determine a patient's treatment plan [33]."

Rabbinic Knowledge/Beliefs About BD/DNC

While 89% of rabbis knew BD/DNC is the medical and legal equivalent of cardiopulmonary death in the USA, this survey demonstrated that rabbinic knowledge about the intricacies of BD/DNC determination is poor. Notably, respondents were not asked if they had ever discussed BD/DNC with a clinician or interacted with a family whose loved one was undergoing an assessment for BD/DNC. Regardless, it is unclear if rabbinic perspectives on BD/DNC would be any different if rabbis knew more about the medical requirements for BD/DNC.

It is well-acknowledged that the numerous conflicting interpretations of the representation of death in Jewish texts have led to "ambiguities [6]" and a "dichotomy of opinions [4]." Not only is there variability in the acceptance of the use of neurologic criteria to define death between rabbis of both differing and identical denominations, but both individual rabbis and religious organizations themselves vacillate in their own stances on BD/DNC. Some rabbis have published opinions that appear self-contradictory and "ostensibly change course entirely [8]." Similarly, the Rabbinic Council of America (the Orthodox organization included in this survey) announced in the 1980s, "Accepted neurologic criteria fully meet the standards of halacha for determining death," but after years of internal debate, they published a report challenging BD/DNC as death [33].

As this fluctuation of opinions demonstrates, and as a few respondents noted, acceptance of BD/DNC and management after BD/DNC is not black and white for all rabbis; some view it as situational and nuanced. Rabbi Schostak writes that, "Each case should be directed to a halakhic authority, who should be familiar with all the clinical considerations since there are often significant nuances which distinguish one case from another [7]." Furthermore, Grodin notes that identifying whether or not someone is dead requires, "fact finding and testimony...Tentative or final "answers" will be arrived at through a complex process of exegesis, principle and interpretation referring to Torah, Talmud, codes, and responsa [31]."

Impact of Rabbinic Knowledge/Beliefs About BD/DNC

The rabbinic perspective on BD/DNC is inconsistent due to varying interpretations of religious texts±lack of awareness of medical facts about BD/DNC. Knowledge about the legal status of BD/DNC does not appear

to impact perspectives on BD/DNC, given that 97% of Orthodox rabbis were aware that BD is the medical and legal equivalent of cardiopulmonary death throughout the USA, but only 53% said they believed a person who is brain dead is dead. Grodin writes that, "Disagreement and argument are not unusual in Jewish law. In fact, that is the norm...Controversy is not only expected, but in many cases welcomed [31]." But Rabbi Sheer notes that, "There are many arenas of Jewish law where divergent opinions are the norm and the lack of a uniform position may bring some discomfort. But in those contexts, accommodation is possible and the hardship is minimal. In this area of life and death, where a family's loss is so encumbered by pain and sadness, the last thing rabbis should wish to do is to increase that pain and to abet dissension and discord [33]." He further notes that "the lack of a unified rabbinic position on brain death could foster confusion in our community at a time when rabbinic guidance is most needed [33]."

Given the varied perspectives on BD/DNC, it is unlikely that all rabbis will ever be able to come to a uniform accord on the matter. However, because the confusion Rabbi Sheer describes extends beyond an intellectual debate in the Jewish community and affects both Jewish and non-Jewish patients, families, and healthcare providers who may be asked to delay determination of BD/DNC or continue organ support after BD/DNC declaration based on a patient's Jewish beliefs or the advice of their rabbi, secular law must standardize the process of addressing such objections. Doing so would minimize the challenges that develop when families voice religious objections to BD/DNC [14–29]. The findings from this survey, the first empirical data on rabbinic perspectives on BD/DNC, may provide helpful background for clinicians, lawmakers, and ethicists seeking to unify legal management of religious objections to BD/DNC.

Limitations

Surveys have limitations. The sample size of this study is small. Low survey response rates are the result of time constraints and lack of direct benefit to individuals who complete surveys [34]. Although the exact number of rabbis who received the survey is unknown, the survey was sent to at least 2500 rabbis, yet responses were only received from 99 rabbis (4% response rate). Because of this, there is a possibility of sample bias; it is important to acknowledge that these results represent the knowledge and opinions of respondents, but they do not necessarily reflect the knowledge and opinions of all rabbis of a given denomination. Additionally, respondents were asked to provide feedback on their own beliefs, but they were not asked how they would advise a family to handle a

situation in which a determination of BD/DNC was being performed on their family member.

When reviewing the statistical significance of each belief, it is worth noting that although each belief was evaluated independently, many of these beliefs co-vary. As such, the findings of this study should be valued as descriptive, but no definite inferences should be made based on the statistical results.

Some respondents commented that there were no instructions about whether or not to ignore considerations of organ donation when responding to questions about continuation of organ support after BD/DNC. Confusion about this may have influenced answer selection.

On a related note, although the use of multiple-choice and yes–no questions provided discrete data for analysis, the use of more open-ended questions would have provided more in-depth information about rabbinic perspectives on BD/DNC.

Conclusions

Based on the first empirical study of rabbinic knowledge and perspectives about BD/DNC, it can be concluded that (1) rabbinic knowledge about the intricacies of BD/DNC determination is poor and (2) perspectives on management after BD/DNC vary both between and within denominations. These findings may be helpful for (1) healthcare providers faced with objections to BD/DNC based on Jewish beliefs and (2) clinicians, lawmakers, and ethicists seeking to unify legal management of religious objections to BD/DNC.

Electronic supplementary material

The online version of this article (<https://doi.org/10.1007/s12028-019-00742-3>) contains supplementary material, which is available to authorized users.

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Author contributions

AL was responsible for conception and design, analysis, and interpretation of data, drafting the manuscript, statistical analysis, and final approval of the manuscript.

Source of support

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Conflicts of Interest

Ariane Lewis has no disclosures or conflicts of interest.

Ethical Approval/Informed Consent

None.

Data

Ariane Lewis takes responsibility for the data and accuracy of data analysis.

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