Forgoing Life-Sustaining Treatments: Comparison of Attitudes between Israeli and North American Intensive Care Healthcare Professionals

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Abstract

Background: Physicians' decisions regarding provision of life-sustaining treatment may be influenced considerably by non-medical variables.

Objectives: To examine physicians' attitudes towards end-of-life decisions in Israel, comparing them to those found in the United States.

Methods: A survey was conducted among members of the Israel Society of Critical Care Medicine using a questionnaire analogous to that used in a similar study in the USA.

Results: Forty-three physicians (45%) responded, the majority of whom hold responsibility for withholding or withdrawing life-sustaining treatments. Preservation of life was considered the most important factor by 31 responders (72%). The quality of life as viewed by the patient was generally considered less important than the quality of life as viewed by the physician. Twenty-one responders (49%) considered withholding treatment more acceptable than withdrawing it. The main factors for decisions to withhold or withdraw therapy were a very low probability of survival of hospitalization, an irreversible acute disorder, and prior existence of chronic disorders. An almost similar percent of physicians (93% for Israel and 94% for the U.S.) apply Do Not Resuscitate orders in their intensive care units, but much less (28% vs. 95%) actually discuss these orders with the families of their patients.

Conclusions: Critical care physicians in Israel place similar emphasis on the value of life as their U.S. counterparts and assign DNR orders with an incidence equaling that of the U.S. They differ from their U.S. counterparts in that they confer less significance to the will of the patient, and do not consult as much with families of patients regarding DNR orders.

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Intensive care units often provide hope in medical situations that were previously considered doomed to failure. Despite considerable efforts invested into the search for predictors of survival in critical care states [1], the medical literature provides no guidelines for defining futile therapy [2,3]. Thus the distinction between possible salvage and futile efforts remains unclear and the critical care physician carries the responsibility of providing healthcare within reason.

Decisions regarding the provision of life-sustaining treatment often incorporate non-medical variables. Physicians can be influenced by religious, professional and sociological considerations as well as their ethnic background [4]. The Israel Patient's Rights Law requires patient permission and consent for performance of medical procedures [5], yet recent literature has demonstrated that end-of-life decisions are rarely discussed with patients [6].

Studies addressing the attitudes of critical care personnel towards forgoing life-sustaining treatments and the degree to which patients and their families are involved in these decisions have been performed in both North America and Europe [7–10]. The present study sought to examine physicians' attitudes towards end-of-life decisions in Israel and to compare them to those expressed by medical healthcare personnel in other countries [7–10]. We hypothesized that given the influences of cultural and sociological factors on decisions regarding forgoing life-sustaining treatment, significant differences would be found in Israel.

Materials and Methods

The study was a survey of physicians' opinions performed in Israel during 1994–1996. During this period questionnaires were sent to the 95 physicians who were at the time members of the Israel Society of Critical Care Medicine. The physicians were requested to complete the questionnaires and return them to the investigators. After a predetermined period, a second and then a third round of questionnaires were sent to those physicians who had not returned the forms. Informed consent for participation in the study was implied by completing the questionnaire.

The questionnaires were tested for reliability in assessing attitudes towards ethical issues in critical care medicine, yielding at least fair to good agreement beyond chance by intraclass correlation coefficient (Kappa of Cohen >0.40), and had been used in a previous study [7]. These questionnaires were chosen in order to enable comparison of the results of the current study with those of a previous study performed in the United States [7].

In order to ensure comprehension and consistency, the terms that were used throughout the questionnaire were defined (e.g., "withholding" and "withdrawing" of life-sustaining treatments). The questionnaire included demographic and professional characteristics of the responder, case scenarios, and direct questions regarding opinions and attitudes towards forgoing life-sustaining treatments. Results of the questionnaires were anonymous.

DNR = Do Not Resuscitate

Statistical analysis

Data analysis was performed using SPSS 2.0 (SPSS Inc. Chicago, IL, USA). Categorical data were analyzed using the chi-square test. Particular details in the physician's demographic data (continuous variables such as age, experience, work-time in the ICU) were compared using Spearman's correlation coefficient with replies to questions on withholding or withdrawing treatments in terminal patients and "Do Not Resuscitate" orders.

Confidence intervals for the difference between the two samples (Israeli and U.S.) are presented for the percent of positive replies to each of the questions. Results were tabulated and presented alongside the previous U.S. study [7].

Results

Of 95 questionnaires that were distributed, there were 43 responses (45%). The characteristics of the responders are shown in Table 1. Their mean age was 50 years (range 35–65 years), they practiced in hospitals with a median total number of 650 beds and 6 ICU beds. The medical education of 22 responders (52%) and the specialty training of 30 (70%) were acquired in Israel. Twenty-six responders (60%) were graduates of an intensive care fellowship and 28 (65%) had worked for more than 10 years in the ICU.

The first part of Table 2 summarizes the responders views of their professional duty towards patients who are unable to express their own wishes. The percent of responders who viewed their professional duty towards their patient as being to preserve life foremost was greater than in the U.S. (72% vs. 57%, CI 0–30). A smaller percent of responders believed they should ensure quality of life foremost but evaluate preservation of life (16 vs. 31%, CI 2–28) [Table 2].

The physicians' attitudes toward foregoing life-sustaining treatments are presented in the second part of Table 2. None of the responses differed significantly from those given by the professionals of the U.S. study. Twenty-one Israeli responders (49%) were of the opinion that withholding treatment was more acceptable than withdrawing it, as compared to 255 (43%) of the U.S. responders [CI (-11) to 23]. Fifteen Israeli responders (35%) and 275 U.S. responders (46%) considered withholding and withdrawal of treatment to be the same [CI (-5) to 27]. When confronted with a patient deemed both irreversible and terminal, 20 Israeli responders (46%) and 334 U.S. responders (56%) were not

ICU = intensive care unit
CI = confidence interval

Table 1. Demographic characteristics of the responders

Characteristic	Israel (n=43)	U.S.* (n=600)	*P* value
Male	95	77	⩽ 0.01
Married	95	77	⩽ 0.01
Jewish religion	91	15	⩽ 0.001
Secular	56	37	NS
Specialty			
Anesthesiology	35	19	
Pediatrics	23	22	⩽ 0.01
Internal Medicine	23	30	
Surgery	12	24	
Academic practice	56	58	NS
More than 50% time spent in the			
ICU	70	77	NS
General ICU	77	45	⩽ 0.001
Physician status in the ICU			
Director	44	30	NS
Attending senior	30	42	
Fellow	5	12	
Complete or partial responsibility for withholding or withdrawing therapy	81	68	NS

Data are presented as percent responders who replied affirmatively positive to each characteristic. *P* values for group analysis are based on chi-square. $P > 0.05$ is considered not significant (NS).
* All U.S. data were received directly from the Ethics Committee of the U.S. Society of Critical Care Medicine. Permission to use the U.S. data was granted by the authors of the original article published in *Critical Care Medicine* [7].

Table 2. Percent of responders choosing each of the options regarding the sentence that best describes: a) their view of professional duty towards patients when there is no possible patient input into the decision, b) their attitudes towards withholding and withdrawing treatment. The confidence interval is given for the difference between the proportions of each chosen response in each population

	Israel (n=43)	U.S.* (n=600)	CI for the difference (95%)
My attitude regarding professional duty towards patients when there is no possible patient input into the decision:			
Preserve life foremost but evaluate quality of life	72	57	0–30
Ensure quality of life foremost but evaluate preservation of life	16	31	2–28
Always ensure quality of life	2	4	(-3)–8
Always preserve life at all costs	7	2	(-4)–14
Other	2	5	(-3)–9
My opinion is best described by:			
Withholding treatment is more acceptable than withdrawing	49	43	(-11)–23
Withholding and withdrawing is the same	35	46	(-5)–27
Withdrawing treatment is more acceptable than withholding	12	6	(-5)–17
When confronting a patient who has an irreversible terminal condition I am:			
Not disturbed by withholding or withdrawing treatment	46	56	(-7)–27
More disturbed by withdrawing than withholding treatment	28	26	(-13)–17
Equally disturbed by withholding or withdrawing treatment	14	10	(-8)–16
More disturbed by withholding than by withdrawing treatment	12	4	(-3)–19

* All U.S. data were received directly from the Ethics Committee of the U.S. Society of Critical Care Medicine. Permission to use the U.S. data was granted by the authors of the original article published in *Critical Care Medicine* [7].

Table 3. Factors influencing decisions to withhold or withdraw therapy*

	Israel		U.S.**
	Withhold	Withdraw	Withholding and withdrawing
Most important factors			
Patient unlikely to survive hospitalization	28 (65%)	25 (58%)	367 (61%)
Patient's acute disorder is probably irreversible	28 (65%)	22 (51%)	322 (54%)
Nature of chronic disorders	24 (56%)	22 (51%)	326 (54%)
Your personal attitude	22 (51%)	22 (51%)	126 (21%)
Quality of life as viewed by patient	22 (51%)	21 (49%)	403 (67%)
Quality of life as viewed by physician	21 (49%)	19 (44%)	129 (21%)
Least important factors			
Patient's previous hospital admissions	39 (91%)	39 (91%)	423 (71%)
Social worth	38 (88%)	39 (91%)	628 (88%)
Costs to society	34 (79%)	36 (84%)	365 (61%)
Social and economic impact on society	34 (79%)	35 (81%)	272 (45%)
Financial cost-benefit analysis	32 (74%)	36 (84%)	368 (61%)
Nursing morale	33 (77%)	33 (77%)	300 (50%)
Patient's previous mental/psychiatric history	29 (67%)	30 (70%)	455 (76%)

Results are presented in decreasing incidence of responses according to the Israeli data

* In the US study no distinction was made between withholding or withdrawing treatment. In the current study, physicians were requested to address withholding of therapy and withdrawal of therapy separately.

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disturbed by withholding or withdrawing treatment [CI (-7) to 27]. In the current study older physicians were significantly less disturbed by withholding or withdrawing treatments in terminal patients than their younger counterparts ($P < 0.05$). There was no difference in being disturbed by withdrawal of treatment.

Table 3 demonstrates the factors affecting decisions to withhold or withdraw therapy. Those considered most important included: the patient is unlikely to survive hospitalization, the acute disorder of the patient is probably irreversible, and prior existence of chronic disorders. Israeli responders imparted less importance to patient attitudes than to their own attitudes. These findings differed from those in the U.S.

Forty Israeli responders (93%) stated that they had withheld life-prolonging treatments from patients and 37 (86%) stated that they had withdrawn life-prolonging treatments from patients. These results are comparable to those found in the U.S. study: 89% [CI (-5) to 13] and 87% [CI (-11) to 13] respectively [7].Since subgroup analysis of the U.S. cohort by religion demonstrated a higher tendency to practice withholding (98%) and withdrawal (99%) of therapy by Jewish practitioners, we also looked at this subgroup. In the current study the incidence of withholding (92%) and withdrawal (87%) of therapy among Jewish practitioners was similar to the cohort as a whole.

Physicians' attitudes towards withholding and withdrawing different treatments for a hypothetical patient are presented in Table 4. These attitudes were examined in different family situations. The Israeli cohort tended to listen to the family requests less than did the U.S. cohort: more than 80% of the responders refused to withhold or withdraw fluids regardless of family requests. They would also avoid withdrawal of respiratory support or withholding the reconnection of a disconnected ventilator. Most Israeli healthcare professionals would also avoid withholding and withdrawing nutrition. This was true of U.S. healthcare professionals only in situations where the family did not insist on letting the patient die. The majority of responders stated that they would withhold or withdraw cardiopulmonary resuscitation for a cardiac arrest. Seventy percent of the responders would withhold CPR even against family wishes. More than half the responders would withhold vasopressors irrespective of family request. However, withdrawal of vasopressors in septic shock was agreed upon by the majority of responders only if the patient had no family or a family that insisted that the patient be allowed to die [Table 4].

Finally, the majority of responders in both Israel and the U.S. stated that they applied "Do Not Resuscitate" orders in their ICU (93% and 94% respectively). When correlated with the responders' background, no trend towards any of the attitudes examined was found. When DNR orders were applied, only 12 of the Israeli responders (28%) would discuss the decision with the families of the patient, compared to 570 of the U.S. responders (95%).

Discussion

The present study demonstrates that the majority of Israeli critical care physicians practice withholding and/or withdrawing of life-sustaining treatments and that almost half of these practitioners are not disturbed by such practice. Israeli physicians attach less importance to patient preferences than to other factors affecting end-of-life decision-making and do not commonly discuss these decisions with the patients' families.

This study is the first attempting to delineate attitudes of critical care physicians in Israel towards the issue of forgoing life-sustaining treatments. *Halakha* (Jewish Law) regards human life as sacred and forbids the withdrawal of treatment that directly leads to death, but allows withholding of treatment [11]. The fact that a slightly higher percentage of responders in the current study tended to view their professional duty towards their patient as being to preserve life foremost would seem to indicate a certain degree of agreement with Jewish traditional concepts. A large proportion of Israeli physicians also thought that withholding treatment was more acceptable than withdrawing, but in this they were no different from their U.S. colleagues. Although Halakhic rules do not

CPR = cardiopulmonary resuscitation

Table 4. Physicians' attitudes towards withholding and withdrawing different treatments based on family situation

In order to respond to these situations the participants were presented with the following case vignette: A 50 year old man has longstanding chronic obstructive pulmonary disease with hypoxemia and CO_2 retention and increasing admissions for respiratory failure, the last two of which required intubation and ventilation for several weeks. The patient presents with pneumonia and has cardiac arrest soon after admission. After 1 week the patient remains unresponsive and breathes spontaneously. One month later he remains in a comatose vegetative state.

	No family			Family insists that everything be done to save the patient			Family insists that the patient be allowed to die now		
	Israel	US*	CI (95%)	Israel	US*	CI (95%)	Israel	US*	CI (95%)
Percent of physicians who did not agree to withhold:									
Fluids	91	76	4–25	95	92	(-5)–11	84	55	16–42
Replacing a disconnected ventilator	84	62	9–35	91	84	(-3)–17	81	51	16–44
Nutrition	61	51	6–26	77	84	(-7)–21	54	36	1–35
Percent of physicians who agreed to withhold									
CPR in cardiac arrest	91	82	(-1)–19	70	33	22–52	93	93	(-9)–9
Vasopressor agents in shock	84	77	(-6)–20	58	35	7–39	86	91	(-7)–17
Percent of physicians who did not agree to withdraw									
Fluids	93	76	7–27	98	62	29–43	86	56	18–42
Respiratory support	88	46	30–54	93	85	(-1)–17	79	27	38–66
Nutrition	58	59	(-16)–18	86	87	(-11)–13	54	38	0–33
Percent of physicians who agreed to withdraw									
CPR in cardiac arrest	79	79	(-14)–14	58	46	(-4)–29	81	89	(-5)–21
Vasopressor agents in shock	65	67	(-14)–18	44	21	7–39	70	84	(-1)–29

Data are presented as the percent responders from each population who chose the specific response. The 95% confidence interval is given for the difference between the proportions of responders in each population.

* Unpublished data that were received directly from the Ethics Committee of the US Society of Critical Care Medicine. Permission to use these data was granted by the authors of the original article published in *Critical Care Medicine* [7].

guide medical decision-making in Israel, cultural and religious inclinations have been known to have an effect on medical decisions [10,12].

Despite this slightly more conservative approach, when given a general patient scenario Israeli physicians stated that they had withheld and withdrawn treatments with equal frequencies as U.S. professionals. A European study also showed a greater tendency to withhold (93%) rather than withdraw (77%) treatment [10].

The exact legal status of forgoing life-sustaining treatments in terminally ill patients in Israel is not clear. A clause dealing with this issue was specifically excluded from the Patient's Rights Law. Some experts assert that withdrawing treatments or even writing a DNR order is not allowed without judicial permission. It is therefore interesting that a majority of physicians stated that they had either withheld or withdrawn therapies or had applied DNR orders.

In a previous study performed in an Israeli ICU, Eidelman et al. [13] reported that withholding life-prolonging treatments was common in an Israeli ICU whereas withdrawing therapy was limited to brain-dead patients. The findings from that study differ from those of the present study. This may be due to several factors. First, withdrawal was defined differently in the two studies. Withdrawal of an intermittently given therapy was considered in the Eidelman study as withholding therapy, whereas in our study it was considered withdrawal in order to be consistent with the previous U.S. study with the same questions [7]. Withdrawal of a continuously given therapy such as a ventilator was considered withdrawal in both studies. This would explain the high percentage of responders in our study who refused to withdraw support. Second, the Eidelman study was of actual practice over a short period whereas our study represents responses to a theoretical questionnaire related to practice among all physicians. Physicians may not actually act as they think they do. Finally, differences may be secondary to the fact that Eidelman and co-workers examined a small subgroup of physicians working within a single ICU, while this survey encompassed ICU physicians throughout the country, whose practice may be very different.

The factors affecting decisions of Israeli physicians to withhold or withdraw therapy were similar to those in the U.S [7]. The most important among them were: the patient is unlikely to survive hospitalization, the patient's acute disorder is irreversible, and the nature of the patient's chronic disorders. This study did not support the findings of a study performed in Canada that the patient's previous cognitive state was an important factor in these decisions [14]. The least important factors included the patient's previous hospitalization and social worth. The costs to society, the social and economic impact on society and financial cost-benefit analysis were considered less important factors in Israel than in the U.S [7]. The Israeli National Healthcare Insurance Law guarantees optimal medical therapy for each and every citizen. Realistically, the increasing cost of medical equipment and technology together with the aging of the population impose a significant burden on the finances of the healthcare system. Medical therapy provided in ICUs comprises a significant part of this burden [10,15]. Israeli physicians' priorities seem to a greater degree to be the well-being

of their individual patients then the costs of their patient's therapies to society.

Israeli responders had a paternalistic attitude toward end-of-life decisions, with less regard for patient autonomy. They believed that their personal attitude and their view of the patients' quality of life were as important as the quality of life as viewed by the patient. Interestingly, most responders in the U.S. cohort considered the quality of life as viewed by the patient as more important than the physician's view [7], whereas in the European survey the quality of life as viewed by the patient or the physician were not considered important factors [10].

Israeli responders were more willing to withhold CPR despite family insistence that everything be done to save the patient, and they were more willing to withhold and withdraw vasopressor agents in shock in the same situation. However, these responders were less willing to withhold and withdraw maintenance therapy such as ventilatory support, fluids and nutrition, both on their own initiative and even when the family clearly supported such action. They did not change withholding or withdrawing of specific therapies based on family request as much as U.S. responders, and they tended to honor requests to continue therapies more than requests to withhold or withdraw. Since Israeli physicians also tended less to withhold and withdraw specific treatments even when there was no family, these findings may stem from a tendency to place emphasis on the personal attitude of the physician. However, such findings may also be due to the current uncertainty regarding the legal status of the family in such situations. Family request is never mentioned as a factor to be considered when vital decisions are to be made regarding the management of patients in The Israeli State Law on Patients' Rights.

The lack of communication between physicians and families in the decision-making process with regard to forgoing life-sustaining treatments may also stem from similar causes. In our study only 28% of the responders stated that they discussed DNR orders with the patient or family. Discussing DNR may be interpreted as discussion of CPR only and not other aspects of forgoing life-sustaining treatments. It is reasonable, however, to assume that physicians who avoided DNR discussions also did not discuss forgoing other therapies with families. This contrasts with the results of the European survey where 77% of responders stated that such orders were discussed [10] and the U.S. survey where 95% of responders stated so [7].

Several differences were noted between the populations surveyed in the current study and other surveys. The mean age of the Israeli responders was 50 years, representing an older population than the U.S. cohort where the mean age was 38 [7]. All the responders in our study were physicians, whereas the U.S. cohort included a small number of critical care nurses. Only 5% of the responders in our study were female, compared to 23% in the U.S. study, and none of the responders in our study were single, compared to 19% in the U.S. study [7]. A greater number of professionals in the current study were practicing in general ICUs. This may be due either to the smaller proportion of specialized ICUs in Israel compared to the U.S., or to the fact that physicians working in specialized ICUs in Israel are often trained in that specialty only and not in critical care.

There are several limitations to the present study. The sample size is small; however, the overall number of critical care physicians in Israel is also small. Caution must be exercised when interpreting the results of our survey since the response rate was only 45%. Nonetheless, it is important to note that this response rate is comparable to that seen in the U.S. (52%) [7] and European (40%) studies [10], and is also typical for questionnaire surveys. The data obtained may not represent all critical care practitioners in Israel, but a majority of the responders are directors and senior physicians in ICUs, who are very likely to be responsible for policy-making for these decisions.

As Israeli law remains uncertain and a new law concerning these issues stands before the Israel Parliament, the current survey carries important implications for further discussions regarding the issue of forgoing life-sustaining treatments in Israel.

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