Examining the Attitudes and Beliefs of California Pharmacists Toward Dispensing Medications Intended to be Lethal

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Abstract

Objective: This study examined California pharmacists’ attitudes and beliefs toward dispensing medications intended to be lethal.

Method: A two-page survey instrument was administered in person and by mail to California-licensed pharmacists in 2016. The survey collected information on demographic characteristics (n=6 items), pharmacists’ attitude toward their role in the End of Life Option Act (ELOA, n=16 items), knowledge of the Act (n=4 items), and one comment section. Pharmacists rated their attitudes on a five-point bipolar Likert scale ranging from strongly disagree (1) to strongly agree (5).

Results: A total of 63 pharmacists responded, most of whom were male (n=32, 51%), considered themselves religious (n=41, 65.1%), and had an average age of 40.1 (SD=13.0) years. Only 30 (47.6%) respondents were willing to personally dispense a lethal dose of medication requested by a terminally ill patient with a valid prescription, while most agreed that they had the right to refuse to dispense a prescription intended to be lethal (n=56, 88.9%). Only 16 (25.4%) pharmacists reported having adequate knowledge to dispense and counsel on an ELOA drug. Most pharmacists called for more training on how to dispense and counsel patients about these lethal medications (n=54, 85.7%). Pharmacists’ beliefs differed by whether they were religious or not (p<0.05).

Conclusion: Fewer than half of the pharmacists were willing to personally dispense a lethal dose of medication requested by a terminally ill patient with a valid prescription. California pharmacists do not have adequate knowledge concerning the End of Life Act. Further research on pharmacists’ attitudes and beliefs is needed.

Keywords: End of Life Option Act; physician aid in dying; physician-assisted suicide; pharmacist attitudes

Introduction

In September 2015, California became the fifth state in the United States to legalize physician-assisted suicide (PAS) with the passing of the End of Life Option Act (ELOA). The California ELOA allows California physicians to prescribe a lethal dose of medication for self-administration by a terminally ill patient, defined as a patient with less than six months to live. If the steps specified in the law are followed, the medication can be prescribed and dispensed without any of the involved health care providers facing civil or criminal liability.

California pharmacists are being presented with prescriptions for drugs intended to be lethal. Physicians can deliver these prescriptions to a participating pharmacy by hand, through the mail, or electronically. The involvement of pharmacists in the planned death of patients, wittingly or unwittingly, through the legalization of PAS in California raises several issues for pharmacists. (1) Surveys of pharmacists in other states reveal that pharmacists are divided on the issue of PAS. (2) A national survey of pharmacists found that 72.6% of respondents believed that assisted death may be appropriate in some situations, (2) and a few respondents believed that it was appropriate for pharmacists to help a patient to die. Another national survey found that a majority of pharmacists believed that PAS was appropriate in some cases. (3) In general, pharmacists support the patient’s right to participate in PAS in some cases. (4)

Past research found that pharmacists’ attitudes toward PAS differ by age (younger: more negative) and degree of religious affiliation (higher: more negative), and practice setting and personal experiences. (2) Pharmacists practicing in chain stores were found to be less willing to participate in PAS than those practicing in independent and hospital pharmacies. (2)

Little is known about California pharmacists’ attitudes toward and beliefs about PAS and about their willingness to dispense a lethal dose of medication intended for use in PAS. The aim of the study is to investigate California community and retail pharmacists’ attitudes toward and beliefs about PAS and their willingness to dispense medications intended for use in PAS. The specific objectives of the study are to:

1. Determine pharmacists’ beliefs and attitudes toward dispensing medication intended for PAS.
2. Determine pharmacists’ knowledge of the provisions of the End of Life Option Act.
3. Determine the main factors that are associated with pharmacists’ attitudes and overall willingness to dispense a lethal dose of medication for PAS under the End of Life Option Act.

Methods

The protocol of this cross-sectional study was approved by the Loma Linda University Health Institutional Review Board. The study utilized a two-page survey instrument to collect data from California-licensed pharmacists in June and July 2016. The questionnaire was developed primarily from existing pharmacy and medical literature on PAS.
The survey collected information on demographic characteristics (n=6 items), pharmacists’ attitude toward their role in ELOA (n=16 items), knowledge of the Act (n=4 items), and one comment section. Pharmacists rated their attitudes and beliefs on a five-point bipolar Likert scale ranging from strongly disagree (1) to strongly agree (5).

The paper surveys were distributed in person by members of the Loma Linda University California Pharmacy Student Leadership (CAPSLEAD) 2016-2017, mostly in Southern California. Other surveys were distributed by mail by CAPSLEAD members. The questionnaire and a cover letter explaining the purpose of the study were either personally handed to each of the conveniently selected pharmacists or mailed to them. Only registered and currently active pharmacists practicing in California who consented to participate were included in this study. CAPSLEAD members selected the pharmacists to target, mostly those they knew and had interacted with in the past. All nonactive California pharmacists, interns, and those practicing in other states were excluded from this study.

Pharmacists were asked to complete and return the questionnaires to the researchers. Pharmacists were offered an aggregated summary of the study results as an incentive to respond. The estimated time required to complete the questionnaire was 10 minutes. Questionnaires were not marked with an identification number.

Data Analysis

Data were entered in Microsoft Excel® 2010 and uploaded to Statistical Package for Social Sciences® (SPSS) version 22.0 for analysis. Descriptive statistics were computed for all study variables. Independent sample t-tests and Analysis of Variance (ANOVA) with Tukey’s post-hoc comparisons were conducted. A p-value of ≤ 0.05 was considered statistically significant.

Results

Most respondents were male (n = 32, 50.8%), practiced in the community setting (n = 35, 55.6%), and considered themselves religious or spiritual (n = 41, 65.1%) (Table 1). The respondents were on average 40.1 years old (SD=13.0; range: 24-84 years) and had been practicing for 10 years or less (n= 37, 58.7%). Twenty-one (33.3%) and 19 (30.2%) respondents were Catholics and Protestants, respectively (Table 1).

Thirty (47.6%) pharmacists agreed/strongly agreed that they were willing to personally dispense a lethal dose of medication requested by a terminally ill patient with a valid prescription (mean = 4.11 ±0.74) than those who rated themselves not religious were more willing to personally dispense a lethal dose of medication requested by a terminally ill patient with a valid prescription (mean = 2.98±1.35) (t= -4.178; df = 56.3, p < 0.001).

For example, the respondents who rated themselves as being religious were more negative on 11 of the 16 attitudes items regarding the End of Life Option Act (p<0.05). Male pharmacists were more supportive of the End of Life Option Act than female pharmacists on three of the 16 items (p<0.05). There was no statistically significant difference by gender on the remaining 13 items.

There was no statistically significant difference in pharmacists’ attitudes and beliefs by age, years practicing pharmacy, practice setting, and religious affiliation (p > 0.05) across all 16 items.

Factors Associated with Pharmacists’ Beliefs and Attitudes

After excluding those who were unsure, those who considered themselves religious were more negative on 11 of the 16 attitudes items regarding the End of Life Option Act (p<0.05). For example, the respondents who rated themselves as being not religious were more willing to personally dispense a lethal dose of medication requested by a terminally ill patient with a valid prescription (mean = 4.11 ±0.74) than those who rated themselves as being religious (mean = 2.98±1.35) (t= -4.178; df = 56.3, p < 0.001).

Male pharmacists were more supportive of the End of Life Option Act than female pharmacists on three of the 16 items (p<0.05). There was no statistically significant difference by gender on the remaining 13 items.

There was no statistically significant difference in pharmacists’ attitudes and beliefs by age, years practicing pharmacy, practice setting, and religious affiliation (p > 0.05) across all 16 items.
Table 1. Demographic and practice characteristics of respondents (n = 63)

| Characteristics                          | Frequency | Mean (SD) |
|------------------------------------------|-----------|-----------|
| Age                                      |           | 40.1 (13.0) |
| Gender                                   |           |           |
| Male                                     | 32 (50.8) |           |
| Female                                   | 31 (49.2) |           |
| Years practicing pharmacy                |           | 13.4 (12.9) |
| 0-10 years                               | 37 (58.7) |           |
| 11-20 years                              | 11 (17.5) |           |
| 21-30 years                              | 8 (12.7)  |           |
| 31-40 years                              | 5 (7.9)   |           |
| Over 40 years                            | 2 (3.2)   |           |
| Practice setting                         |           |           |
| Community                                | 35 (55.6) |           |
| Managed Care                             | 9 (14.3)  |           |
| Inpatient/Hospital                       | 8 (12.7)  |           |
| Other (e.g., hospice, consulting, academia) | 8 (12.7) |           |
| Ambulatory                               | 3 (4.8)   |           |
| Considered themselves religious/spiritual|           |           |
| Yes                                      | 41 (65.1) |           |
| No                                       | 19 (30.2) |           |
| Unsure                                   | 3 (4.8)   |           |
| Religious Affiliation                    |           |           |
| Catholic                                 | 21 (33.3) |           |
| Protestant                               | 19 (30.2) |           |
| Buddhist                                 | 4 (6.3)   |           |
| Atheist                                  | 4 (6.3)   |           |
| Gnostic                                  | 4 (6.3)   |           |
| Hindu                                    | 2 (3.2)   |           |
| None                                     | 9 (14.3)  |           |
Table 2. Respondents' opinions regarding the End of Life Option Act and PAS

| Statement (n = 63)                                                                 | D or SD N (%) | Neutral N (%) | A or SA N (%) |
|----------------------------------------------------------------------------------|---------------|---------------|---------------|
| a. I am willing to personally dispense a lethal dose of medication requested by a terminally ill patient with a valid prescription. | 14 (22.2)     | 19 (30.2)     | 30 (47.6)     |
| b. Competent patients should have the right to end their own lives.                | 9 (14.3)      | 12 (19.0)     | 42 (66.7)     |
| c. The End of Life Option Act will help reduce (non-assisted) suicide rates.       | 10 (15.9)     | 22 (34.9)     | 31 (49.2)     |
| d. It may be appropriate for doctors to help terminally ill competent patients to end their lives. | 9 (14.3)      | 10 (15.9)     | 44 (69.8)     |
| e. Helping a patient to die is an acceptable medical use of prescription drugs (n=62). | 11 (17.8)     | 25 (40.3)     | 26 (41.9)     |
| f. The beliefs of pharmacists who object to participating in assisted patient death under the End of Life Option Act for reasons of conscience must be respected. | 3 (4.8)       | 4 (6.3)       | 56 (88.9)     |
| g. I feel comfortable dispensing the End of Life Option Act medication.            | 17 (27.0)     | 22 (34.9)     | 24 (30.1)     |
| h. I have the right to refuse dispensing a prescription intended to be lethal.     | 3 (7.8)       | 4 (6.3)       | 56 (88.9)     |
| i. I feel comfortable counseling on the End of Life Option Act medication.        | 21 (33.3)     | 15 (23.8)     | 27 (42.9)     |
| j. There should be more training on how to dispense and counsel on prescriptions for lethal medication. | 3 (4.8)       | 6 (9.5)       | 54 (85.7)     |
| k. I have adequate knowledge to dispense and counsel on an End of Life Option Act drug. | 35 (55.6)     | 12 (19.0)     | 16 (25.4)     |
| l. It is appropriate for a pharmacist to refuse to dispense an End of Life Option Act prescription. | 4 (6.5)       | 4 (6.5)       | 54 (87.1)     |
| m. I believe I have a moral obligation to participate in dispensing medications intended to be lethal for those patients with a valid prescription (n=62). | 22 (34.9)     | 23 (36.5)     | 18 (28.6)     |
| n. The End of Life Option Act is morally and ethically just.                      | 13 (20.6)     | 30 (47.6)     | 20 (31.8)     |
| o. A terminally ill patient has the right to choose to end his/her own life (n=62). | 5 (8.1)       | 15 (24.2)     | 42 (67.8)     |
| p. The dispensing pharmacist should have full access to the patient’s diagnosis and care plan when filling prescriptions intended for the purpose of assisted dying. | 2 (3.2)       | 8 (12.7)      | 53 (84.1)     |
Discussion

Most respondents agreed/strongly agreed that “A terminally ill patient has the right to choose to end his/her own life” (n= 42, 67.8%), “Competent patients should have the right to end their own lives” (n = 42, 66.7%), and that “It may be appropriate for doctors to help terminally ill competent patients to end their lives if they choose. According to 2015 Gallup poll results, a similar proportion of the general public (68%) agreed that terminally ill patients should be allowed to end their lives.”

Similarly, a national survey of pharmacists found that 72.6% of respondents believed that assisted death may be appropriate in some situations. The proportion of pharmacists and the general public who support physician aid in dying has been increasing over time. In 1994, only 48.6% of pharmacists believed that physician-assisted suicide (PAS) may be appropriate in some situations. This proportion of pharmacists who supported PAS in this study is higher than the 54% of US physicians who agreed that PAS should be allowed in 2014.

Despite the pharmacists’ widespread support for PAS in general, slightly fewer than half of the respondents (n=30, 47.6%) were willing to personally dispense a lethal dose of medication requested by a terminally ill patient with a valid prescription, with the rest of them either not willing or neither willing nor unwilling to do so. Consistent with the findings of a previous survey of pharmacists, this suggests that most respondents are not wholeheartedly participating in PAS. The limited participation of pharmacists may be explained by several factors, including their religious and moral beliefs as well as their lack of knowledge on PAS and ELOA.

Table 3. Knowledge of pharmacists

| Item (n=63) | True N (%) | False N (%) | Don’t Know N (%) |
|------------|------------|-------------|-----------------|
| a. Pharmacists cannot be held liable for participating in the End of Life Option Act in California if they adhere to the legal requirements. | 49 (77.8) | 4 (6.3) | 10 (15.9) |
| b. Physicians should inform pharmacists when medications are prescribed for a patient under the End of Life Option Act. | 58 (92.1) | 2 (3.2) | 3 (4.8) |
| c. I have adequate knowledge about the medications used under End of Life Option Act. | 13 (20.6) | 29 (46.0) | 21 (33.3) |
| d. I have adequate knowledge about the End of Life Option Act. | 15 (23.8) | 29 (46.0) | 19 (30.2) |

Most pharmacists (84.2%) believed that they should have full access to the patient’s diagnosis and care plan when filling prescriptions intended for assisted dying. This finding, among others, suggests that pharmacists expect to be informed about the intended purposes of lethal prescriptions that they will be asked to fill. However, under the ELOA, prescribers are not required to discuss the prescribed use of medications with the pharmacist. This can be problematic given the lack of standardized medications that are uniquely indicated for PAS. Consequently, a dispensing pharmacist may be unaware of the intended purpose of a lethal prescription arriving at his or her pharmacy. Having access to the patient’s diagnosis and care plan when filling prescriptions intended for PAS will help minimize the chances of inadvertently filling one. A previous study reported that most (66.6%) pharmacists believed that it was not appropriate for physicians to involve a pharmacist in PAS without his or her knowledge and consent.

A majority of respondents (n=56; 88.9%) agreed they had the right to refuse to dispense a prescription intended to be lethal. Pharmacists’ as well as physicians’ and health systems’ participation in ELOA in California is voluntary, and they cannot face legal or economic consequences for declining to participate in ELOA. However, only 49 respondents (77.8%) knew this important fact regarding participating in ELOA in California.

Many California pharmacists indicated that they had inadequate knowledge concerning the ELOA and dispensing lethal medications. Many pharmacists are unaware of the law and its effects on their scope of practice. Only 25.4% (n=16) of our pharmacists felt they had adequate knowledge to dispense and counsel patients about an ELOA drug. This inadequate knowledge and training may limit pharmacists’ participation in d-
dispensing and counseling patients about a lethal medication. Further education and training is needed to improve California pharmacists’ knowledge and awareness regarding medications intended to be lethal and the ELOA. This improved knowledge and awareness will help pharmacists to appropriately counsel patients about a lethal medication.

Similar to a previous study\(^3\), the opinions of pharmacists varied by whether they considered themselves to be religious or not. Those who considered themselves religious were less likely to be supportive of some ELOA provisions. Age, gender, practice setting, and years practicing pharmacy were not statistically significantly related to pharmacists’ beliefs about PAS and their support for ELOA’s provisions.

**Limitations of the Study**

The findings of the study need to be considered in view of the following two limitations. First, the study has a small sample size of 63 pharmacists. Second, the study utilized convenience rather than random sampling to select the pharmacists for inclusion. Consequently, not all California pharmacists had an equal chance of participating in our study. Significantly fewer surveys were distributed to pharmacists in Northern California. In addition, none of the study participants were of Jewish or Islamic faiths despite these religions being common in California. The opinions and beliefs of members of these faiths are therefore not represented in our study. The study findings may not be truly representative of the beliefs and attitudes of the entire population of pharmacists in California.

**Conclusion**

Fewer than half of the pharmacists surveyed were willing to personally dispense a lethal dose of medication requested by a terminally ill patient with a valid prescription. Many pharmacists do not have adequate knowledge concerning the End of Life Option Act. Further education, awareness, and training of California pharmacists regarding the End of Life Option Act is needed. Further research using a larger and more representative sample is needed to gain a better insight into the attitudes and beliefs of California pharmacists regarding the End of Life Option Act.

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