

BRIEF

A Simulated Approach to Fostering Competency in End-of-Life Care Among Pharmacy Students

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Objective. To determine if pharmacy students participating in simulation-based scenarios reported fewer learning needs about the transition from acute to end-of-life (EOL) care compared to students participating in solely case-based scenario delivery.

Methods. Four end-of-life cases were developed for both paper-based case study and simulation delivery. Pharmacy students on three distant campuses were exposed to the case study approach while four teams of nine to ten pharmacy students were exposed to simulated versions of the same cases. A validated questionnaire was administered before and after exposure to assess end-of-life care learning needs. Results were analyzed following a Bonferroni-adjustment for multiple testing.

Results. The case study groups produced similar pre/post changes on the questionnaire. After results were pooled and compared to the simulation only group, significantly higher changes in pre/post scores were found for the simulation group.

Conclusion. Pharmacy students exposed to simulated EOL scenarios experienced significantly reduced learning needs following the scenarios, unlike their classroom-based counterparts.

Keywords: simulation, education, end-of-life, palliative care

INTRODUCTION

Transitioning from acute care to end-of-life (EOL) care is often a time of turmoil and great emotional stress for the patient as well as family and friends.¹⁻³ The health care professional must navigate psychosocial factors, spiritual needs, and in some cases, ethical dilemmas when addressing EOL decision making.⁴ The patient's declining physical state often leads to the use of intensive interventions and multiple medications. While such interventions may extend life, the quality of that life may not meet the patient's expectations. According to Fridh, lack of communication with patients and families about the transition from intensive cure efforts to comfort care prevents the delivery of effective EOL care.⁴ In addition, when the decision to accept EOL care occurs, ethical challenges can arise related to sedation practices and removal of life-saving interventions.⁴ Pharmacists' medication knowledge places them in a unique position to assist patients requiring EOL care, however, few courses in pharmacy school prepare them

for such an occasion.⁵ Surveys of medical and nursing schools report close to 100% of them offering education on death and dying, versus approximately 60% of pharmacy schools.⁵⁻⁷ Yet, the pharmacist section of the National Hospice and Palliative Care Organization (NHPCO) advocates for the pharmacist role in the care of dying patients.⁸ The American Society of Health-System Pharmacists defines the role of the pharmacist in hospice care from the perspective of the medication management process, including dispensing, consulting and clinical services.⁹

A review of 35 reports by Threapleton and colleagues indicated that health care providers, aside from specialists, need more training in EOL care to meet the growing EOL care needs and to facilitate EOL care communication.¹⁰ A survey study by Latuga, Wahler and Monte found that for hospices based in tertiary care centers, pharmacists played a significant clinically focused role as opposed to one that was dispensing focused.¹¹ Furthermore, a positive association was found between formal hospice training for pharmacists and more time in clinical service provision. Training needs to take into consideration the opportunities that exist for pharmacists to impact patient care delivery.

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End-of-life care refers to support and medical care provided during the time leading up to a patient's death. Health care providers are often highly involved with the patient's care and their family during this time. Preparing students to provide this type of care can be challenging in a classroom environment. More attention is turning to the use of simulation to facilitate the learning process.

Pharmacy accreditation standards, issued by the Accreditation Council of Pharmacy Education (ACPE), now include increased emphasis on preparing pharmacy students who are "practice-ready" and "team-ready" upon graduation.¹² Under these standards ("Standards 2016"), colleges and schools of pharmacy must demonstrate that each graduating student is prepared to effectively collaborate with health care providers, including prescribers and other health care professionals, in providing high quality, hands-on patient care.¹² In the Guidance Document to Standards 2016, Key Element 12.f encourages simulation as a means of teaching pharmacy students when there is a need for "hands"-on learning opportunities that enhance student learning experiences (e.g., ensuring student pharmacists are exposed to important disease states which they may or may not experience in "real" patient care.¹³ Furthermore, up to 20% (60 hours) of introductory pharmacy practice experiences can be replaced with simulation-based activities.¹² End-of-life care is a prime example in which students may not be exposed to the opportunity in a real-life setting prior to graduation.

The use of patient simulation is designed to help bridge the concepts learned in a classroom to an actual clinical environment.^{14,15} Gaba defines simulation as "a technique to replace or amplify real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner."^{16,17} Simulation allows students to practice using their didactic knowledge in a safe environment where decisions will not result in harm to a living patient and immediate feedback can be provided by faculty and preceptors.^{18,19}

Nursing and medical students often participate in a simulated study before and after graduation.^{18,20,21} While increasing in number, integration of pharmacy students in the utility of high fidelity simulation (HFS) has been limited.²² Additionally, few longitudinal studies have examined pharmacy students and EOL care.⁷

The primary objective of this study at the University of Florida was to compare attitudes toward EOL competencies in pharmacy student groups on the Jacksonville campus exposed to simulated EOL ethical challenges (four scenarios) with those of cohorts exposed to paper-based case study versions on three other campuses: Gainesville, Orlando and St. Petersburg.

METHODS

A two-independent group study design was developed to assess pharmacy student attitudes toward EOL learning needs before and after exposure to EOL simulations compared to paper-based control groups. All third-year students enrolled in the University of Florida College of Pharmacy were required to complete a pharmacy law and ethics course, which included a series of four EOL scenarios as a class exercise. The University of Florida has four pharmacy campuses in the state: Gainesville, Jacksonville, Orlando, and St. Petersburg. Each campus has unique qualities with size playing an important role. The Gainesville campus enrolls approximately 130 students per class, Orlando enrolls approximately 75, and Jacksonville enrolls approximately 40. The St. Petersburg campus is currently phasing out its program, but at the time of the study enrolled approximately 50 students. The curriculum for the college, which changed since completion of this study, followed a blended approach including pre-recorded didactic material as well as synchronous and asynchronous learning. The pharmacy law and ethics course was structured to provide pre-recorded lectures followed by a weekly asynchronous two-hour discussion session regarding the laws and ethical material the students had watched through the pre-recorded videos. The discussion sessions were held by faculty with a background in both law and pharmacy at each campus, using a facilitator guide which was prepared by the course coordinator. At the time of this study, Jacksonville was the only campus with a simulation center that could be used for this activity; thus, it was decided that the simulation approach would be tested at this campus and compared to the other campuses that would be using the traditional classroom-based case studies. The intervention group of Jacksonville pharmacy students (n=37) participated in four simulated EOL care scenarios reflecting ethical challenges at the transition from curative to comfort care. Pharmacy students were organized into groups of nine to ten. In addition, a small group of graduate nurse practitioner students (n=8) joined the pharmacy student groups, with two added to each group for a pilot interprofessional perspective.

The students completed a survey instrument immediately prior to and following the EOL scenarios: Lazenby's End of Life Professional Care Giver Survey (EPCS), a reliable and validated 28-item tool with a 5-point Likert scale, assesses learning needs across three subconstructs (or "factors" as described by the tool's authors): communication (items 1-12), cultural and ethical values (items 13-20), and effective care delivery (items 21-28).²³ Higher scores reflect greater perceived skills and fewer

learning needs in each of the three factors. The tool was designed and validated to assess multidisciplinary health care professional EOL learning needs, but more recently has been used to assess pre/post changes in students, similar to this study with Head and colleagues reporting moderate to large effect size.²⁴ Gaffney used the EPCS as a pre-assessment tool to inform EOL workshop content development aimed at nurses.²⁵ In our case, the tool was chosen specifically because it was designed for administration to more than one type of health care professional, unlike others like the End of Life Nursing Education Consortium (ELNEC) Test, designed specifically for nurses.²⁶

The control group consisted of pharmacy students at the Gainesville, Orlando and St. Petersburg campuses who completed paper-based case studies of the same four EOL-themed scenarios to which the simulation group (Jacksonville) was exposed. Students from the St. Petersburg campus participated synchronously via video with students at the Gainesville campus. The control groups were exposed only to a faculty-led discussion of the same four EOL scenarios used in the simulation group.

To maintain privacy, students were not asked to provide any identifying factors such as age, race or sex. All students signed consent forms and were given online access to the survey tool (Survey Planet, LLC; Los Angeles, CA). This study was deemed exempt by the University of Florida at Jacksonville's Institutional Review Board.

For the simulation group (Jacksonville), the scenarios were conducted at the Center for Simulation Education and Safety Research. The center contains multiple high-fidelity computer-controlled mannequins for training purposes, including a Laerdal SIM Baby Simulator. All simulations took place in bays designed to simulate relevant units (ie, Neonatal Intensive Care Unit [NICU], medical-surgical unit, etc.) reflected in the case scenarios. Each bay had a faculty member present to facilitate the scenario.

Both pharmacy (n=37) and nursing students (n=8) were divided proportionally into four groups (two nursing students and nine to ten pharmacy students) and briefed about the scenarios. Students were then exposed to each of four scenarios in turn, spending 30 minutes at each station where they were briefed, engaged with actors for 7-8 minutes and then debriefed for 15 minutes. Groups were allowed two hours to complete all four scenarios, using the same time frame as the control group working on paper-based case study versions of the scenarios.

Scenarios represented patients across the lifespan, and in diverse settings including the NICU and medical surgical unit. Patient situations focused on ethical dilemmas in the transition from curative to comfort care.

The simulations included: a patient with muscular dystrophy, now on a ventilator; an infant dying from various birth anomalies; a 68-year-old with diminished mental capacity dying from pneumonia; a retired chemist in severe pain who believes in physician-assisted suicide. A sample case is provided in Appendix 1. The three paper-based groups completed discussion sessions using the same cases and questions completed by the simulation group. After all the simulations and paper-based case discussions were completed, all students were asked to complete the post survey using the same electronic instrument.

Wilcoxon rank sum tests were used to compare across sites for the EPCS. Comparisons were made for questions pre-intervention and post-intervention and the change between the two (post- minus pre-). A p value of $<.05$ was considered significant. Pairwise tests were performed when the overall test was significant. Pairwise tests used a Bonferroni adjustment to account for multiple comparisons (adjusted $p \leq .0018$). All analyses were run using SAS Version for Windows, Version 9.4 (SAS Institute, Cary, NC).

RESULTS

The main outcome performance measure was the difference between the EPCS pre- and post-scores. Out of 225 students, 208 (92%) completed the pre-EPCS and 192 (85%) completed the post-EPCS. Answers from 50 students had to be excluded because the 50 students took only the pre-test or only the post-test, or they did not use a unique identifier. Therefore, the total number of EPC surveys that could be analyzed was 175 (78%), including 35 pharmacy students from the Jacksonville campus and six of the eight nursing students (simulation group), 40 pharmacy students from Orlando, and 100 pharmacy students from Gainesville/St. Petersburg (all part of the control group). A multi-step process was undertaken to compare pre- and post-test values across the sites. Frequency histograms were created, and summary statistics were estimated, followed by Wilcoxon rank sum tests. A comparative analysis of each of the paper-based case-study exposed groups (Gainesville, Orlando, and St. Petersburg) revealed no statistical differences in performance between groups, so only two group comparisons (Jacksonville versus the other three campuses) are reported here.

Table 1 provides pre- and post-comparisons between the Gainesville, Orlando, and St. Petersburg groups combined to that of the Jacksonville group with the univariate analysis results for the EPCS ($p \leq .05$). Bonferroni adjustment was then undertaken to correct for issues with

Table 1. Comparison of Interprofessional Simulation (N=35) vs. Traditional Paper-Based Case Study Approach (N=140) on Pre/Post Perceived End-of-Life Education Needs²³

	Questionnaire Item	Paper-based Groups Mean	Simulation Group Mean Scores	Difference	p value
P1	I am comfortable helping families to accept a poor diagnosis.	83.7	105	21.2	.02
P2	I am able to set goals for care with patients and families.	86.9	92.7	5.7	>.99
P3	I am comfortable talking to patients and families about personal choice and self-determination.	86.9	92.8	5.9	>.99
P4	I am comfortable starting and participating in discussions about code status.	82.9	108.5	25.6	<.001 ^a
P5	I can assist family members and others through the grieving process.	80.9	116.3	35.4	<.001 ^a
P6	I am able to document the needs and interventions of my patients.	86.0	96.2	10.2	>.99
P7	I am comfortable talking with other health care professionals about the care of the dying patient.	83.0	107.9	24.9	.01
P8	I am comfortable helping to resolve difficult family conflicts about end of life care.	80.4	118.3	37.9	<.001 ^a
P9	I can recognize impending death (physiologic changes).	84.5	101.9	17.4	.05
P10	I know how to use non-drug therapies in management of patients' symptoms.	85.2	99.5	14.3	>.99
P11	I am able to address patients' and family members' fears of getting addicted to pain medications.	84.2	103.1	18.9	.04
P12	I encourage patients and families to complete advanced care planning.	83.5	105.9	22.4	.01
C1	I am comfortable dealing with ethical issues related to end of life/hospice/palliative care.	81.8	112.6	30.8	<.001 ^a
C2	I am able to deal with my feeling related to working with dying patients.	83.6	105.6	22.0	.02
C3	I am able to be present with dying patients.	83.5	105.9	22.4	.01
C4	I can address spiritual issues with patients and their families.	83.8	104.9	21.1	.02
C5	I am comfortable dealing with patients' and families' religious and cultural perspectives.	82.0	111.9	29.9	<.001 ^a
C6	I am comfortable providing grief counseling for families.	81.9	112.5	30.6	<.001 ^a
C7	I am comfortable providing grief counseling for staff.	82.2	111	28.8	<.001 ^a
C8	I am knowledgeable about cultural factors influencing end-of-life care.	83.7	105.2	21.5	.02
E1	I can recognize when patients are appropriate for hospice referral.	83.9	104.4	20.5	.02
E2	I am familiar with palliative care principles and national guidelines.	85.43	98.29	12.9	>.99
E3	I am effective at helping patients and families navigate the health care system.	86.47	94.31	7.8	>.99
E4	I am familiar with the processes hospice provides.	83.88	104.5	20.6	.02
E5	I am effective at helping to maintain continuity across care settings.	82.77	108.9	26.1	.01
E6	I feel confident addressing requests for assisted suicide.	86.51	94.09	7.6	>.99
E7	I have personal resources to help meet my needs when working with dying patients and families.	86.23	95.16	8.9	>.99
E8	I feel that my workplace provides resources to support staff who care for dying patients.	86.23	94.86	8.6	>.99

Wilcoxon rank sum was used to determine significance

^a Items remaining significant following a Bonferroni adjustment, defined as $p < .0018$

multiple comparisons by reducing the chance of incorrectly rejecting a null hypothesis. In all, six items remained significant following the Bonferroni adjustment, with two in the patient and family communication factor (P5, P8), and four in the culture and ethical values factor (C1, C5, C6, C7). None of the items in the effective care delivery factor demonstrated a significant difference between Jacksonville and the other campuses. The pre/post comparison of EPCS items for Jacksonville students alone showed a significant difference in all but two items: P2 (setting goals for care with patients and families) and P3 (talking to patients and families about personal choice and self-determination).

DISCUSSION

This study investigated whether third-year pharmacy students changed their perceived learning needs with EOL care following exposure to simulated EOL scenarios compared with paper-based versions of the same scenarios. Simulation is increasingly a significant component of education programs across the health care professions. While embraced by many, its impact on learning domains and perceptions vary. From a pharmacy student perspective, Sansom and Cox expressed concern that the lack of realism in simulated patient encounters alters responses by the caregiver that would otherwise arise in a real-world experience.²⁷ However, EOL care is one such encounter where health care providers can face emotional challenges.²⁸ Hamilton expressed the “imperative” of simulation-based EOL education to prepare students to cope with the stress of managing and meeting their patients’ EOL care needs.²⁹

EOL-based simulation experiences are in fact far better understood in medical and nursing students, where studies abound for the latter. Gillian’s review of 16 articles identified four themes emerging from EOL simulation studies with nursing students. These include knowledge gained through experiential learning, impact of family members, debriefing needs, and methodological issues.³⁰ In another review of 19 studies, nursing students demonstrated more self-confidence and knowledge, and better understood the complexities and priorities of EOL care following exposure to simulated EOL experiences.³¹ An important design consideration arising from Gillian’s review included the need to encourage reflective thinking. We used structured ethics themed questions to guide the debriefing which may have inhibited, rather than facilitated the reflective learning process that Gillian found to be an important benefit of EOL simulation. Rather than using a simulation debriefing strategy, encouraging students to “describe what went well/what you would do differently,” a series of questions specific to the case that matched those in the case study groups were used.

Medical students have been subjects of EOL simulations less frequently than nursing students but with beneficial outcomes when exposed. In a study with similar design features to ours, a cohort of 35 resident physicians participated in three 90-minute sessions that incorporated interactions with simulated family members.³¹ Pre/post assessment of preparedness for EOL communication demonstrated significant improvement for all items on the investigator-designed 6-item tool.³² Similarly, Lewis and colleagues exposed fourth-year medical and third-year nursing students to two EOL simulations and debriefings, then they measured their pre/post assessment of attitudes toward EOL care. In this case, their tool was the validated 30-item “Frommelt Attitudes Towards Care of the Dying (FATCOD)” with a 5-point Likert scale survey tool.³³ There was significant improvement in the summed pre/post mean, and an increase in the mean score of 26 items, including items like “Giving care to the dying person is a worthwhile experience.”³³

While nursing and medical students have traditionally been exposed to far more EOL simulation than pharmacy students, Gilliland and colleagues studied pharmacy students exposed to simulations that, like ours, were EOL focused.³⁴ The second of their two questionnaires (“Attitudes Toward Death,” “End of Life Competencies”) was similar to the EPCS used in this study, measuring perceived competency in EOL care. They reported significant improved self-perceived competency in providing EOL care.³⁴

In our study, the EPCS findings were significantly different in 19 questions prior to pair-wise adjustment and six items following pair-wise adjustment, suggesting students participating in the simulation group did feel more comfortable with EOL issues following the simulations compared to those who did not participate in these simulations. Researchers found the most significant change in the “Culture and Ethical Values” factor, with four of seven items demonstrating highly significant changes. This was of interest, given that the scenarios, in their paper format, were part of a course focused on ethics in health care for the pharmacy students. Importantly, students participating in the scenarios showed an increased comfort with EOL care compared to those participating in the traditional class-based case studies, indicating EOL cases conducted via simulation may increase pharmacy students’ comfort level upon graduation.

Including graduate nursing students as a pilot of interprofessional exposure had an unexpected consequence. For instance, in one group, nursing students with years of experience took over the provider role during the scenario and had ready answers to the simulated dilemmas, as they were exposed to similar experiences in

their work life. This may have influenced the pharmacy students in their perceptions about EOL care and subsequent decision making in the case. The pharmacy students tended to draw on ethical theories as they considered how best to address the ethical dilemma they faced, as they were instructed to do so during the debriefing. However, the graduate nursing students in at least one group interjected with real-life examples of decision-making processes, in terms of how resource utilization and personnel often affected ethics-based problem solving. They also had a better grasp of how legal constraints shaped such decision-making processes.

The value of experience and its influence over others in shaping perceptions was an unanticipated finding in this study. Understanding how that knowledge based “power” might shape the response to ethical dilemmas is an area worth exploring. For example, Paynton described the informal (personal) power strategies utilized by nurses to advocate for their patients to circumnavigate organizational and physician constraints of more formal power structures.³⁵

Our study has some limitations. First, the number of questionnaires that were analyzed was lower than expected. For the EPCS, 50 questionnaires were unable to be analyzed. Additionally, we used the EPCS in a way that few others had, by administering it to students rather than health care professionals, and by using it in a pre/post fashion. Further investigation into the reliability of this approach would be warranted.

A second limitation was time. Specifically, not all students in the simulation group were able to actively participate in the simulations. Therefore, those who participated may have a difference in perception versus those who only observed the simulation. Finally, because of the small number of nursing student participants, any analysis on their pre- and post-scores is unreliable as no distinction in type of student was included in the questionnaire. Despite these limitations, the findings helped to inform us about needed changes in our approach to simulations to improve students’ attitudes toward EOL care.

The use of simulation provides a real-life experience we are unable to provide through paper-based discussions. Our simulations took place in a simulation center; however, it would be possible to recreate the simulations on a smaller scale and deliver them in the classroom setting to reduce cost and scheduling difficulties. Furthermore, while we were interested in investigating the interprofessional impact of having another profession present, we learned that we would instead need to include students who were at a similar level of experience as the pharmacy students. As we move forward in our current focus on interprofessional simulations, we are integrating

accelerated undergraduate nursing students into our simulations using ratios more reflective of actual clinical practice settings.

CONCLUSION

In this study, pharmacy students participating in simulated EOL scenarios perceived more comfort with handling EOL issues following the scenarios, unlike their classroom-based counterparts using paper-based versions. The simulation-based cohort experienced a positive change (ie, an increased comfort level with EOL) in questions on the EPCS overall, and six questions following pair-wise adjustment, indicating that simulation-based scenarios had a greater impact on pharmacy students involved in the simulations versus those students exposed to paper-based scenarios.

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Appendix 1. Sample Case Scenario

Charlie is an 80-year-old retired chemist with a master's degree, who spent his career working in a soap company doing quality control for their production plant. Charlie is a widower and lives alone. Charlie is a careful person who takes his time making decisions. Charlie has experienced joint pain and back pain for the last 5 years, and the symptoms have become more severe over time. He did research on the Internet and decided to discontinue use of celecoxib after public concern emerged over the use of Cox-2 inhibitors. Charlie now switches periodically between naproxen and ibuprofen, depending on his perceived efficacy of the two drugs. Charlie also has hypertension and insomnia.

Over the weekend, the pain became increasingly more severe, which worsened his insomnia. As a result, Charlie had to be hospitalized. He was admitted to City Hospital. After 2 days, physicians were able to control his pain, and felt he was able to manage his care now at home.

Polly is a pharmacist, who works in the outpatient pharmacy of City Hospital. Polly and Charlie both play violin for the town's orchestra and have known each other for many years. They are friendly with one another but are not close friends. He has admitted to her on a number of occasions that he is lonely. Every time they see one another, Charlie and Polly engage in friendly verbal sparring about sports, politics, and current events. They discussed the Teri Schiavo case when it was in the news a few years ago, and Charlie told Polly that he thinks the policy in the United States should be that aging Americans must be permitted to decide when they will die in order to "go with dignity." Polly disagreed, telling Charlie that it would be unnatural to use medication in order to intentionally end one's life.

Polly sees discharge prescriptions for Charlie and decides that she will deliver them to him personally. She notices that the prescriptions are written for 60 OxyContin 20mg to be taken every 12 hours, and 30 secobarbital 100mg to be taken daily at bedtime. Polly is concerned about this new drug regimen, and fears that Charlie may use these drugs to commit suicide. Polly believes these drugs have not been prescribed for a legitimate medical purpose, because there are less dangerous drugs available to treat pain and insomnia. She tells her pharmacy supervisor that she must, as a matter of conscience, refuse to dispense these drugs because her religious beliefs cause her to object to physician-assisted suicide. The pharmacy supervisor insists that Polly should dispense the medications as prescribed and deliver the medications as she had planned. The pharmacy supervisor cautions Polly not to provide warnings to Charlie about the potentially fatal effect of using these medications contrary to the way they have been prescribed, because this could be interpreted as teaching Charlie how to use the drugs to kill himself, which would be the exact opposite of what Polly wishes and could expose the hospital to legal liability.

Polly arrives to Charlie's room where the nurse Nancy is providing him with discharge counseling. Charlie says, "I see you have my medications, Polly. Please tell me about them."

***We will need one student to play Polly and one student to play Nancy. Facilitator will play Charlie. Please let the simulation play out for about 3-5 minutes before beginning organized discussions.

Ask whether Polly is correct with her contention that Charlie's prescriptions are issued outside a legitimate medical purpose. Ask the students to evaluate this contention based on what they know about the Oregon Death with Dignity Act.

What has Charlie expressed? He agrees with those who choose to die with dignity

Are the drugs indicated for Charlie's condition? **YES.**

Are they the best drugs? **NO.**

Could these drugs end Charlie's life? Highly likely if he takes them all at once.

Polly is probably wrong.

These may not be the best drugs to treat pain and insomnia, although they also may be (OxyContin is certainly fine, secobarbital is questionable although this is the indication). But the question really changes the subject. The subject is not whether this is the best medical care, or whether there are reasonable alternatives to these drugs. **The subject is whether these are acceptable therapies for the condition for which they have been prescribed.** And they are. There is no evidence of diversion and misuse - that is what the controlled substance regulations are supposed to address; not improvements in the quality of drug therapy. These prescriptions do not violate federal law. Perhaps there are better choices of therapy, but **federal law does not require the best choice** of therapy among several available choices.

Step One: Clarify the facts

These facts are known and are relevant:

- Charlie's condition is worsening and he is in pain.
- The combination of 1.2 grams of oxycodone and 3 grams of secobarbital is potentially fatal, and stockpiling is possible.
- Charlie is an educated independent thinker, who makes decisions for himself.
- Charlie and Polly are on friendly terms with one another.
- Charlie has a political perspective that favors assisted suicide by elderly patients.
- The class will have many others.

What else do we want to know? The following facts are not known and are relevant:

- Does Charlie exhibit any symptoms of depression?
- Has Charlie expressed any present intent to commit suicide? (The expression of public policy preference does not qualify as a suicide threat).
- The class will have many others.

Step Two: Clarify the values

The following values are at stake for the pharmacy/hospital:

- Respecting Charlie's right to receive legal and therapeutically indicated drugs.
- Respecting Charlie's autonomy as an independent person.
- Respecting Polly's personal beliefs.
- Dispensing drugs only for a legitimate medical purpose.
- Protecting the pharmacy and hospital from legal liability.
- Meeting public expectations for high quality pharmaceutical care.
- The class will have many others.

Step Three: Determining the options

The pharmacy could:

- Refuse to dispense the medications to protect Charlie from their potentially fatal effects and protect the pharmacy/hospital from legal liability.
- Have a different pharmacist dispense the medications, allowing Polly to step out of the way, because this is a valid assertion of the appeal to conscience, ensuring that the alternate pharmacist provides complete patient counseling, including the potentially fatal nature of the drugs when used other than the way they are prescribed.
- "Refuse and Refer"
- Require that Polly dispense these medications and insist that she tell Charlie only that they must be used exactly as prescribed.
- Require that Polly dispense these medications and insist that she provide complete patient counseling, including the potentially fatal nature of the drugs when used other than the way they are prescribed.
- The class will have many others.

Step Four: Choosing an option.

I think this is the place where there should be extensive open discussion. I can provide my input below, but that is just my two cents.

Refuse to dispense the medications to protect Charlie from their potentially fatal effects.

- This option is the safest from the pharmacy/hospital perspective, but it fails to respect Charlie's right of self-determination.
- A risk manager may prefer this option.

Have a different pharmacist dispense the medications, allowing Polly to step out of the way, because this is a valid assertion of the appeal to conscience, ensuring that the alternate pharmacist provides complete patient counseling, including the potentially fatal nature of the drugs when used other than the way they are prescribed.

- This option respects Polly's right of objection/conscience, but this is not truly an appeal to conscience, since there is no clear intent to commit suicide, and the drugs have been prescribed for pain and insomnia, two conditions about which there is no moral dilemma (or there should not be).

Require that Polly dispense these medications and insist that she tell Charlie only that they must be used exactly as prescribed.

- This option meets the responsibility to provide medications that are legal and are indicated, but it does not provide Charlie with complete information on the basis of which he can make his own decisions.

Require that Polly dispense these medications and insist that she provide complete patient counseling, including the potentially fatal nature of the drugs when used other than the way they are prescribed.

- This option meets the pharmacy's responsibility to provide the medication, and it meets the responsibility to provide complete information. It is the best choice of those offered; but, Polly disobeys her supervisor here.

The class will have many others.

Assume Charlie is a resident of Oregon, what are his options?

A competent adult resident of Oregon that has been diagnosed with a terminal illness and has voluntarily expressed a wish to die may make a written request for medication for the purpose of ending his life in a humane and dignified manner.