

Clinical Ethics Consultation

Ethics Consultation in United States Hospitals: Assessment of Training Needs

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ABSTRACT

Background

To help inform the development of more accessible, acceptable, and effective ethics consultation (EC) training programs, we conducted an EC training needs assessment, exploring ethics practitioners' opinions on: the relative importance of various EC practitioner competencies; the potential market for EC training (that is, how many individuals would benefit and how much individuals and hospitals would be

willing to pay); and the preferred content, format, and characteristics of EC training.

Methods

As part of a multipart study, we surveyed "best informants" who self-identified as the person most actively involved in EC or healthcare ethics in a random sample of 600 U.S. general hospitals, stratified for bed size.

Results

The competency that was ranked most important for a lead or solo ethics consultant was knowledge of ethics, while common sense was ranked least important. The median estimated number of individuals at each hospital who would benefit from EC training was six at the basic level, three at the advanced level, and two for EC management training. In 19.1 percent of hospitals, respondents thought their hospital would not be willing to pay anything for EC training within the next two years. Respondents thought potential trainees would be likely to participate in EC training on multiple different topics. Opinions varied widely on preferred formats. Most respondents thought it very important to be able to interact with instructors and with other trainees, practice EC skills, receive a certificate for completing EC training, and complete EC training during work hours.

Conclusions

These findings provide U.S. population data that may be useful to healthcare educators and bioethics leaders in their

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efforts to develop EC training programs and products that match trainees' preferences and needs.

BACKGROUND

A training needs assessment is a systematic approach to study the opinions and preferences of a defined target audience regarding training needs. Such assessments enable educators to specifically tailor training programs and products to match identified needs, making them more accessible, acceptable, and effective. Needs assessments can help to inform investment decisions and make training programs more marketable, extending their reach and ultimately their impact. Many see needs assessment as an essential first step in developing an overall education and training strategy for a professional group.¹

Little is known about the training needs of individuals who perform ethics consultation (EC) in United States hospitals. As we described elsewhere, previous studies have relied on convenience samples that overrepresented highly trained bioethicists who work in academic medical centers.² Yet academic medical centers make up only about 5 percent of all hospitals in the U.S.³ The vast majority of EC practitioners in the U.S. are not academic bioethicists and are not highly trained. It is likely that the training needs of the typical EC practitioner are very different from those of academic bioethicists.

To address current gaps in knowledge about EC, we surveyed ethics practitioners in a stratified random sample of U.S. hospitals as part of a broad, multipart study.⁴ The current substudy focuses on the section of the survey devoted to EC training. Findings from another substudy that was already published⁵ provide context for the current study. First, ethics practitioners identified "Lack of access to high quality training for EC personnel" as one of the greatest problems facing their hospital, which suggests that, overall, the educational needs of EC practitioners currently are not being met. Second, ethics practitioners considered "accredited graduate degree programs" as far less useful than other education and training programs for EC practitioners, even though academic bioethicists are often expected to have graduate-level training. Third, in most hospitals, ethics practitioners thought it should take fewer than 20 hours to train someone to perform EC at the basic level, and fewer than 40 hours to train someone to perform EC at

the advanced level. These estimates are strikingly low compared to the training requirements recommended by many bioethicists.⁶

In the current substudy, we expand on these findings by exploring in detail the training preferences of ethics practitioners. Specifically, we report on their opinions regarding the importance of various EC competencies; the potential market for EC training (that is, how many individuals would benefit and how much individuals and hospitals would be willing to pay); and the preferred content, format, and characteristics of EC training.

METHODS

The methods for the broader multipart study are described in detail elsewhere.⁷ Briefly, the study population consisted of the 4,687 general hospitals in an American Hospital Association (AHA) database.⁸ We surveyed a random sample of 600 hospitals, stratified by bed size, from March 2017 to September 2018. Research assistants followed a detailed script to identify the "best informant," that is, the person most actively involved in EC or healthcare ethics at each hospital. Confirmed best informants were invited to participate in the study. The protocol was reviewed and deemed exempt by Chesapeake Institutional Review Board (now Advarra), and the Office of Human Subjects Research Protection at the U.S. National Institutes of Health.

Survey development included a literature review, expert input, cognitive interviews, and pilot testing.⁹ The full survey consisted of two telephone screening questions plus up to 105 online survey questions.¹⁰ This article focuses on eight of these survey questions (37 items, including subparts) that relate to respondents' opinions on EC training.

We analyzed data using SAS version 9.3.¹¹ To determine statistical significance, we used a series of one-way ANOVA tests with contrasts and *chi*-square tests to evaluate the associations between hospital characteristics from the AHA database (bed size category, ownership category, level of academic affiliation, urban/rural location) and survey measures. All contrasts used the Scheffé method of adjustment for multiple comparisons.¹² We used a two-sided probability of .05 as the criterion for statistical significance. The results that are presented below are estimates for the entire population of U.S. general hospitals, determined by weighting the

sampling adjustments that were made prior to analysis.

RESULTS

One hospital (0.2 percent) closed before data collection. In 79 of 599 potentially eligible hospitals (13.2 percent), we were unable to confirm a “best informant,” almost always because the individual others identified as the best informant did not respond to our calls and emails. In 58 hospitals (9.7 percent), the best informant declined to participate. The remaining 462 hospitals completed all or part of the study, for a response rate of 77.1 percent. The results reported here are for the 372 hospitals that had an EC service and responded to all or part of the online survey. Further details including the characteristics of survey respondents are described elsewhere.¹³

What Competencies Do Ethics Practitioners Think Are Most Important for a Lead or Solo Ethics Consultant?

We asked survey respondents to rank the importance of various competencies for someone who performs EC as a lead or solo consultant. (Results are shown in table 1). The competency that was ranked as most important by the highest percentage of hospitals was knowledge of ethics (37.3 percent), followed by interpersonal skills/emotional intelligence (21.2 percent), skills specific to EC (17.6 percent), analytic skills/critical thinking (16.1 percent), and common sense (7.7 percent). Knowledge of ethics was ranked as most important by the highest percentage of hospitals, and common sense was ranked as least important by the highest percentage of hospitals, regardless of hospital bed size category, academic affiliation, or urban/rural location.

What Competencies Do Ethics Practitioners Think Are Most Important for a Member of an EC Service?

When we asked respondents to rank the importance of the same competencies for someone who serves as a member of an EC service,

TABLE 1. Opinions of ethics practitioners in U.S. hospitals regarding the relative importance of various ethics consultant competencies (N= 297)

Competency	% of hospitals assigning each rank				
	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
Lead or solo ethics consultants: In your opinion, how important is it for someone who performs healthcare ethics consultation as a lead or solo consultant to have the following competencies? Rank the following competencies in order of importance, with #1 being the most important.					
Analytic skills/critical thinking	16.2	22.7	18.6	24.9	18.0
Interpersonal skills/emotional intelligence	21.1	30.4	23.4	17.1	7.6
Knowledge of ethics	37.4	22.1	17.4	21.2	2.1
Skills specific to ethics consultation	17.7	14.1	27.4	23.2	16.8
Common sense	7.7	10.6	13.2	13.6	55.6
Other ethics consultants: In your opinion, how important is it for someone who performs ethics consultation with others, as a member of an ethics consultation service, to have the following competencies? Rank the following competencies in order of importance, with #1 being the most important.					
Analytic skills/critical thinking	22.0	12.0	23.5	23.7	18.8
Interpersonal skills/emotional intelligence	20.7	41.3	22.4	11.4	4.2
Knowledge of ethics	22.8	24.9	16.8	25.4	10.2
Skills specific to ethics consultation	17.1	11.3	18.2	23.0	30.0
Common sense	17.3	10.4	19.1	16.6	36.9

all five competencies were ranked as most important by a similar percentage of hospitals (knowledge of ethics 22.8 percent, analytic skills/critical thinking 22.0 percent, interpersonal skills/emotional intelligence 20.9 percent, common sense 17.3 percent, skills specific to EC 17.1 percent).

How Many Individuals Would Benefit from Various Types of EC Training?

Respondents were asked to estimate the number of individuals at their hospital who would benefit from three different types of training: basic level training on how to perform EC; advanced-level training on how to perform EC; and training on how to direct and manage an ethics program.¹⁴ The median estimated numbers of individuals at each hospital who would benefit from these types of training were, respectively: six (mean 13.2, range 0-300); three (mean 7.9, range 0-500); and two (mean 3.0, range 0-100).

For both basic and advanced ethics training, estimates were significantly higher for urban than for rural hospitals (16.3 versus 7.8,

$p < .005$; 10.9 versus 2.6, $p < .05$). For training on directing or managing an ethics program, estimates were again significantly higher for urban than for rural hospitals (3.7 versus 1.8, $p < .05$), and were also higher in federal government hospitals compared to other (non-federal) government hospitals, nongovernment not-for-profit church-operated hospitals, and other nongovernment not-for-profit hospitals (11.7 versus 2.8, 1.8, and 3.2, $p < .005$).

How Much Would Hospitals Be Willing to Pay for EC Training?

We asked respondents to indicate the maximum amount they would estimate that their hospital would be willing to pay for EC training for a single individual within the next two years. (The results are shown in table 2). In 19.1 percent of hospitals, respondents thought their hospital would not be willing to pay anything for EC training within the next two years. Respondents thought their hospital would be willing to pay less than \$500 in 56.1 percent of hospitals, and not more than \$1,000 in 92.5 percent of hospitals. The percentage of hospitals that re-

TABLE 2. Opinions of ethics practitioners in U.S. hospitals regarding willingness to pay for ethics consultation training ($N = 287$)

Cost of training	% of hospitals	Estimated # of U.S. general hospitals
Payment by hospital: What is the maximum amount that you would estimate your hospital would be willing to pay for ethics consultation training for a single individual within the next two years?		
\$0	19.1	895
<\$500	37.0	1,734
\$500 - \$1,000	19.0	891
\$1,001 - \$2,500	16.8	787
\$2,501 - \$5,000	4.6	216
\$5,001 - \$10,000	3.4	159
\$10,001 or more	0.1	5
Payment by respondent: How much would you personally be willing to pay (out of pocket) for ethics consultation training within the next two years?		
\$0	33.0	1,547
<\$500	38.6	1,809
\$500 - \$1,000	20.7	970
\$1,001 - \$2,500	6.3	295
\$2,501 - \$5,000	0.9	42
\$5,001 - \$10,000	0.3	14
\$10,001 or more	0.0	0

spondents thought would not be willing to pay anything did not vary based on hospital characteristics.

How Much Would Ethics Practitioners Be Willing to Pay for Their Own EC Training?

Respondents also were asked to indicate how much they would personally be willing to pay (out of pocket) for EC training within the next two years. (See table 2). Respondents would not be willing to pay anything in one-third of hospitals (33.0). They would be willing to pay less than \$500 in 71.6 percent of hospitals, and not more than \$1,000 in 92.4 percent. The percentage of hospitals in which respondents would not be willing to pay anything did not vary based on hospital characteristics.

How Likely Are Individuals to Participate in EC Training on Various Topics?

We asked survey respondents to consider all the people they know at their hospital who would benefit from EC training and to indicate how likely they thought it was that these people would participate in training on various topics. (Results are shown in table 3). For six of the topics listed, mean ratings were above the midpoint of the scale (three), meaning respondents thought potential trainees would be at least moderately likely to participate in training on that topic. Trainees were thought to be most likely to participate in training on EC cases and on common ethical issues, and least likely to participate in training on EC write-ups or EC evaluation. Ratings did not vary based on hospital characteristics.

How Likely Are Individuals to Participate in EC Training Using Various Formats?

Respondents were asked to rate on a scale from 1 to 5 how likely they thought it was that the people they know at their hospital who would benefit from EC training would participate in training using various formats. (See table 3). All six of the formats received ratings of either 2 or 3 in a majority of hospitals. As a result, mean ratings were below the midpoint of the scale for all six of the formats listed. Format ratings showed a high degree of variability, with all six ratings having a coefficient of variation between 31.8 percent and 36.2 percent, which indicates a wide dispersion of both positive and negative ratings. Overall, the formats that involved limited interaction received higher rat-

ings than those that involved extensive interaction, especially for distance training. Among the formats that involved limited interaction, the highest rated was distance training that was completed at the learner's own pace, while in-person training was rated the highest among formats with extensive interaction. Ratings did not vary based on hospital characteristics, except for in-person training with extensive interaction, ratings were lower in rural hospitals compared with urban hospitals (2.6 versus 3.1, $p < .05$), and in nonteaching hospitals compared with minor and major teaching hospitals (2.5 versus 2.9 and 3.3, $p < .001$).

How Important Are Various Factors that Relate to EC Training?

Respondents were asked, "If you were to participate in EC training, how important would each of the following factors be to you?" (See table 3). Factors that the respondents rated as most important included the ability to interact with the instructor, to interact with other training participants, to practice EC skills, and to receive certification for completing the training. Ratings were much higher for completing the training during work hours than for completing the training outside of work hours. Ratings differed based on hospital ownership and location, but not based on bed size or academic affiliation.

Specifically, ratings were lower in non-federal government hospitals compared with federal government hospitals, nongovernment not-for-profit church-operated hospitals, and other nongovernment not-for-profit hospitals for interacting with the instructor (2.8 versus 3.7, 3.9, 3.9, $p < .0001$), interacting with other participants (2.8 versus 3.6, 3.9, 3.6, $p < .0001$), being part of a group that takes the training at the same time (2.0 versus 3.3, 3.2, 3.0, $p < .0001$), and practicing EC skills (2.7 versus 3.7, 3.6, 3.8, $p < .001$). Ratings were lower in rural hospitals than in urban hospitals for completing the training outside of work hours (1.8 versus 2.3, $p < .05$), being part of group (2.7 versus 3.2, $p < .05$), and practicing EC skills (3.3 versus 3.8, $p < .05$).

LIMITATIONS

The general limitations of the broader survey study are described elsewhere.¹⁵ Another general limitation is that the survey was completed by a single individual at each hospital,

whose opinions may have differed from the hospital's other ethics practitioners. Several questions required respondents to speculate about the behaviors of others—for example, how much their hospital would be willing to spend on EC training, and the likelihood that other staff at their hospital would participate in different

types of EC training. As a result, responses may not reflect actual behaviors.

DISCUSSION

In this training needs assessment, we report on the opinions of ethics practitioners in U.S.

TABLE 3. Opinions of ethics practitioners in U.S. hospitals regarding ethics consultation training topics, formats, and other factors ($N = 290$)

Training topics, formats, and other factors	Mean (5-point scale)	Median	% of hospitals with rating >3	% of hospitals with rating >4
Topics: Considering all the people you know at your hospital, who would benefit from EC training, how likely do you think they would be to participate in ethics consultation training on each of the following topics? [Not at all likely, Somewhat likely, Moderately likely, Very likely, Extremely likely]				
Step-by-step approach to performing EC	3.2	3	81.0	40.4
Mistakes to avoid in performing EC	3.3	3	82.3	40.9
Common ethical issues in EC	3.6	4	87.2	57.3
Case examples in EC	3.6	4	88.4	58.5
EC write-ups	3.1	3	67.7	35.8
EC evaluation	3.1	3	69.5	35.0
Formats: Considering all the people you know at your hospital, who would benefit from EC training, how likely do you think they would be to participate in ethics consultation training using each of the following formats? [Not at all likely, Somewhat likely, Moderately likely, Very likely, Extremely likely]				
In-person training, limited interaction (e.g., classroom lecture)	2.6	3	54.1	23.4
In-person training, extensive interaction (e.g., workshop)	2.7	3	52.5	25.6
Distance training at scheduled times, limited interaction (e.g., live webinar)	2.6	3	46.3	21.7
Distance training at scheduled times, extensive interaction (e.g., small group teleconference)	2.4	2	37.3	16.6
Distance training you complete at your own pace, limited interaction (e.g., video or podcast)	2.8	3	59.4	31.9
Distance training you complete at your own pace, extensive interaction (e.g., online course with discussion board)	2.5	2	41.7	22.3
Other factors: If you were to participate in EC training, how important would each of the following factors be to you? [Not at all important, Somewhat important, Moderately important, Very important, Extremely important.] The ability to:				
Interact with the instructor	3.7	4	80.0	60.9
Interact with other participants	3.6	4	81.9	57.5
Complete the training during work hours	3.3	4	71.7	51.1
Complete the training outside of work hours	2.1	2	34.0	8.4
Complete the training at your own pace	3.2	3	73.3	42.6
Be part of a group that is taking the training at the same time	2.9	3	69.8	34.8
Practice EC skills	3.6	4	84.0	60.4
Receive certification for completing the training	3.5	4	80.8	54.7

Percentages do not total 100 due to rounding. EC = ethics consultation.

hospitals in three areas: (1) the importance of various EC competencies; (2) the potential market for EC training (that is, how many individuals would benefit and how much individuals and hospitals would be willing to pay); and (3) the preferred content, format, and characteristics of EC training.

The Importance of EC Competencies

The most widely recognized practice standard for EC in U.S. hospitals is the American Society for Bioethics and Humanities (ASBH) report, *Core Competencies for Healthcare Ethics Consultation*.¹⁶ The *Core Competencies* report asserts that EC practitioners must possess certain skills, knowledge, and attributes in order to perform competently. Specifically, they must have ethics-related knowledge in a variety of areas, three types of process skills (analytic skills, EC process skills, and interpersonal skills), and attributes such as integrity and compassion. The *Core Competencies* does not mention common sense as one of the competencies required for EC.

Consistent with the *Core Competencies*, we found that ethics practitioners generally ranked knowledge of ethics and analytic skills, process skills, and interpersonal skills as more important than common sense for a lead or solo ethics consultant. The finding that, in contrast to their rankings for a lead or solo consultant, respondents ranked ethics-related knowledge and skills as more on par with common sense for a member of an EC service is consistent with the suggestion in the *Core Competencies* that an individual EC practitioner “needs to meet higher standards for competency” than someone who performs EC under the supervision of another member of the EC service.¹⁷

Potential Market for EC Training

Extrapolating from the results of this study of U.S. general hospitals, we estimate that approximately 62,000 individuals would benefit from basic-level training on how to perform EC, 37,000 would benefit from advanced-level training on how to perform EC, and 14,000 would benefit from training on how to direct and manage an ethics program. These numbers seem high in relation to our estimate of the total number of individuals who perform EC in U.S. general hospitals each year¹⁸—27,000—suggesting that survey respondents thought many individuals who were not currently performing EC would ben-

efit from EC training, especially at a basic level.

Our finding that 19.0 percent of the hospitals surveyed and 33.0 percent of study respondents would be unwilling to pay anything for EC training suggests that, even though the number of individuals who could potentially benefit from EC training is large, the actual market for EC training may be more limited, at least for training that requires payment. Our finding that more than 1,700 hospitals and more than 1,800 individual EC practitioners would be willing to pay up to \$500 for EC training for a single individual in the next two years suggests that educators who are interested in maximizing the market for EC training might consider offering programs and products that cost less than \$250 per trainee per year.

Preferred Content, Format, and Other Characteristics of EC Training

Our findings provide several important insights into the needs and preferences of trainees with regard to the content, format, and other characteristics of EC training. First, potential trainees are likely to participate in EC training on a wide range of topics. For even the least popular topics in our survey, trainees in more than two-thirds of hospitals were thought to be at least moderately likely to participate in training.

With respect to training formats, responses were highly variable, with no clear consensus on which format would be most popular. The highest rated format was “distance training you complete at your own pace with limited interaction,” such as videos or podcasts, followed by in-person training, while the lowest rated format was distance training delivered at scheduled times with extensive interaction, such as small group teleconferences or videoconferences. It is important to note, however, that data collection was completed before the coronavirus pandemic, when teleconferencing and videoconferencing became much more widely used. It is possible that these formats would have been rated differently after respondents acquired more experience with them. With regard to other characteristics of EC training, our findings suggest that respondents in most hospitals consider it very important or extremely important to be able to interact with instructors and with other trainees, to practice EC skills, to receive a certificate for completing the training, and to be able to complete training during work hours. These

findings should help educators tailor their training to better match the needs and preferences of trainees.

Relationship Between EC Training Preferences and Hospital Characteristics

In a different substudy on the opinions of ethics practitioners relevant to quality improvement,¹⁹ we found significant differences based on hospital characteristics, which led us to conclude that the needs of ethics practitioners in small hospitals, nonteaching hospitals, and rural hospitals may be very different from those of large academic medical centers. In particular, we suggested that practitioners in small, nonteaching, and/or rural hospitals tend not to view EC as a professional activity that requires a great deal of training or expertise. This may help to explain some of the findings in the current study, such as the finding that rural hospitals and nonteaching hospitals are less likely to favor in-person training with extensive interaction, and the finding that rural hospitals are less likely to favor training that entails completing training outside of work hours, being part of a group that takes the training at the same time, and practicing EC skills—as these types of training may be viewed as more consistent with a professional training model.

It is also worth noting that, in several areas, training needs were not related to hospital characteristics but were instead consistent across all hospital categories. For example, the same training topics were generally preferred regardless of hospital size, ownership category, academic affiliation, or urban/rural location. In the same way, the willingness to pay for training was similar regardless of hospital characteristics.

CONCLUSION

This study is the first to provide population estimates of EC training needs in U.S. hospitals. These findings may be useful to healthcare educators in their efforts to develop accessible, appealing, and effective EC training programs and products. Educators can also use these data to make their programs more marketable, extending their reach and ultimately their impact. Finally, healthcare and bioethics leaders can use these data to help inform strategies and investment decisions that will shape the future of EC practice on a national level.

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ETHICS APPROVAL

The protocol was reviewed and deemed exempt by Chesapeake IRB (now Advarra) and the Office of Human Subjects Research Protection at the National Institutes of Health.

DISCLAIMERS

The views expressed here are those of the authors and are not necessarily a reflection of the policies of their employers.

NOTES

1. D. Gould, D. Kelly, I. White, and J. Chidgey, "Training needs analysis: A literature review and re-appraisal," *International Journal of Nursing Studies* 41, no. 5 (2004): 471-86.

2. E. Fox, A.J. Tarzian, M. Danis, and C.C. Duke, "Ethics consultation in U.S. hospitals: Opinions of ethics practitioners," *American Journal of Bioethics* advance online publication, 26 March 2021, doi: 10.1080/15265161.2021.1893550.

3. "Daily Briefing: Why some universities are bidding adieu to academic medical centers," *Advisory Board*, 24 April 2015, <https://www.advisory.com/daily-briefing/2015/04/24/universities-dropping-amcs>.

4. E. Fox, M. Danis, A.J. Tarzian, and C.C. Duke, "Ethics consultation in U.S. hospitals: A national follow-up study," *American Journal of Bioethics* advance online publication, 26 March 2021, doi: 10.1080/15265161.2021.1893547.

5. Fox, Tarzian, Danis, and Duke, "Ethics consultation in U.S. hospitals: Opinions," see note 2 above.

6. *Ibid.*

7. Fox, Tarzian, Danis, and Duke, "Ethics consultation in U.S. hospitals: A national follow-up study," see note 4 above.

8. "AHA Annual Survey Database 2016," American Hospital Association, <https://www.ahadata.com/aha-annual-survey-database>.

9. Fox, Tarzian, Danis, and Duke, "Ethics consultation in U.S. hospitals: A national follow-up study," see note 4 above.

10. E. Fox, "National Survey on Ethics Consultation in U.S. Hospitals," 2021, pdf of online-survey instrument, <https://tinyurl.com/EFoxSurvey>.

11. SAS Institute Inc., Cary, N.C.

12. H. Scheffé, *The Analysis of Variance* (New York, N.Y.: John Wiley & Sons, 1999).

13. Fox, Tarzian, Danis, and Duke, "Ethics consultation in U.S. hospitals: A national follow-up study," see note 4 above.

14. The survey included the following definitions: "Basic-level proficiency means the individual is able to perform common and straightforward consultations without supervision. Advanced-level proficiency means the individual is able to perform the most complex ethics consultations without supervision." Fox, "National Survey on Ethics Consultation in U.S. Hospitals," see note 10 above.

15. Fox, Tarzian, Danis, and Duke, "Ethics consultation in U.S. hospitals: A national follow-up study," see note 4 above.

16. ASBH Core Competencies Task Force, *Core Competencies for Healthcare Ethics Consultation*, 2nd ed. (Glenview, Ill.: American Society of Bioethics and Humanities, 2011).

17. *Ibid.*

18. Fox, Tarzian, Danis, and Duke, "Ethics consultation in U.S. hospitals: A national follow-up study," see note 4 above.

19. Fox, Tarzian, Danis, and Duke, "Ethics consultation in U.S. hospitals: Opinions," see note 2 above.