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Ethics in Cardiothoracic Surgery: A Survey of Surgeons' Views

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Abstract

Background—Cardiothoracic surgeons are frequently confronted with complex ethical issues. Educational efforts to help surgeons navigate such issues have been undertaken in recent years, but their effectiveness is uncertain.

Methods—A survey instrument exploring the effects of ethics educational sessions at annual meetings and publications in cardiothoracic surgery journals was sent electronically to cardiothoracic surgeons who belong to The Society of Thoracic Surgeons and the American Association for Thoracic Surgery.

Results—Of 3,705 surgeons, 578 responded (15.6%). The majority of respondents practice in an academic setting (55%), attended at least two of the last five Society annual meetings (66%), and at least one of the last five Association annual meetings (68%). A majority of respondents agreed that their own practices would be improved (69%) and that cardiothoracic surgeons in general would benefit (83%) from better understanding of ethical issues. Respondents also believed that demonstration of an adequate understanding of ethical issues should be part of both American Board of Thoracic Surgery certification and maintenance of certification processes (61% and 60%, respectively). Among respondents who attended ethics presentations at annual meetings, only 4% believed that the sessions did not improve their understanding of complex ethical issues, and only 10% believed that the sessions did not affect their surgical practices.

Conclusions—The survey suggested that efforts toward ethics education for cardiothoracic surgeons might be both relevant and important; the results encourage continuation and further improvement of such efforts.

Before 2000, topics in medical ethics were discussed or mentioned far less often in the surgical than in the medical literature and appeared less often in surgical than in medical meeting programs [1]. The source of this difference was not clear, but it seemed reasonable to conclude that increasing the frequency of ethics discourse among cardiothoracic surgeons could add value to the overall educational efforts of our cardiothoracic organizations. The Ethics Forum, a group whose purpose was to focus on developing ethics educational materials and events, was created in 1999.

The Ethics Forum is a joint committee of The Society of Thoracic Surgeons (STS) and the American Association for Thoracic Surgery (AATS), and is mainly composed of the members of the STS Standards and Ethics Committee and the AATS Ethics Committee. The group's educational efforts have taken the form of debates and other presentations at annual meetings and publication of the presentations as well as editorial commentaries in the official journals of the two organizations, *The Annals of Thoracic Surgery (ATS)* and the *Journal of Thoracic and Cardiovascular Surgery (JTCVS)*. The effectiveness of these various efforts has been unknown, yet understanding their effects on cardiothoracic surgeons and their practices would be helpful in determining how valuable they have been and how they might be improved in the future. A survey of the views of cardiothoracic surgeons was therefore undertaken.

Material and Methods

A 17-question survey was developed to assess the effects of the Ethics Forum's educational agenda on its target audience, cardiothoracic surgeons, and to seek guidance in developing future projects for ethics education. The survey contained questions related to ethics presentations at annual meetings and publications in *ATS* (32 articles in the last 5 years) and *JTCVS* (14 articles in the last 5 years). In addition, the survey sought views on inclusion of ethics education in training programs, board certification, and maintenance of certification (see Appendix^{*}). The membership of the STS and the AATS, including senior and international members, was contacted by sending the survey by electronic mail to the STS membership list (3,705 cardiothoracic surgeons), which includes nearly all members of the AATS. Three weeks after the initial distribution of the survey, we sent a second request for response to the survey instrument.

Results

Responses to the survey were returned by 578 of 3,705 surgeons (15.6%). The distribution of time in practice ranged from 16% in practice less than 10 years to 34% in practice 25 years or more. Among the respondents, 92% were in clinical practice (academic 55%, and private 37%). Most respondents endorsed the importance of ethics education and improved understanding of complex ethical issues in cardiothoracic surgery; 69% agreed that their own practices would be improved by such education, and 83% believed that cardiothoracic surgeons in general would benefit. In addition, 61% of respondents believed that demonstration of an adequate understanding of ethical issues should be part of the American Board of Thoracic Surgery (ABTS) initial certification process, and 60% believed that it should also be included in the ABTS maintenance of certification process.

In the last 5 years, 66% of respondents attended at least two STS annual meetings and 68% attended at least one AATS annual meeting. Of those who attended national meetings, 51% attended at least one cardiothoracic surgery-related ethics session. Among those who attended none of the sessions the reasons for not attending were scheduling conflicts (46%) and not knowing that the sessions were available (29%). Among those who attended one or

^{*}See note at end of article regarding e-only Appendix.

more of the ethics sessions, 64% agreed or strongly agreed that the sessions improved their understanding of ethical issues in cardiothoracic surgery, 32% were neutral, and only 4% disagreed. In addition, 79% confirmed that the debate format is an effective educational format, and only 10% stated that the sessions did not affect their practices.

Of the 32 ethics-related articles that have been published in *ATS* since 2004, 88% of the respondents read at least one and 33% read eight or more. Of the 14 ethics articles that have been published in *JTCVS* since 2004, 74% read at least one and 17% read six or more.

The final survey item requested suggestions for topics to be presented or discussed at ethics sessions at meetings or journal articles—159 individual suggestions were provided.

Comment

Ethics education for physicians has attracted considerable attention in recent years: curricula in medical schools focus increasingly on ethical issues, and the number of medical schools offering formal education in medical ethics grows [2]. However, the content, method and timing vary substantially, suggesting a lack of consensus about the optimal educational process [3]. Including surgery-specific ethics modules within the medical student surgery rotation has been reported, but adding ethics education to an already crowded and demanding curriculum might be difficult to generalize to other programs [4]. In addition, a recent review of the literature found that ethics education for surgical residents is valuable, but that the timing, methods and content of ethics education and training for residents is still a matter of debate [5].

The role of ethics education specifically in cardiothoracic surgery has not been studied, to our knowledge. Ethics topics are not included in the weekly curriculum established by the Thoracic Surgical Directors Association (TSDA), an 88-week comprehensive teaching schedule that constitutes the didactic framework for many training programs in thoracic surgery [6]. Moreover, demonstration of an adequate fund of knowledge regarding complex ethical issues is not required on the ABTS qualifying examination, certifying examination, or maintenance of certification process.

The practice of cardiothoracic surgery, however, requires a sound fund of knowledge and judgment about ethical challenges. A substantial number of such challenges arise in cardiothoracic surgical practice, a pattern that was not well represented in the surgical literature before 2000. The Ethics Forum identified numerous contentious issues for debate or discussion at cardiothoracic meetings and in cardiothoracic journals every year over the last 10 years. There have been 34 such sessions at meetings from November 1999 through November 2009, and 48 ethics-related papers have been published in *ATS* and *JTCVS* from 2000 through 2009. (There is a link to lists of oral sessions and papers in the online version of this article.) The present survey was conducted to evaluate the effect of these educational efforts, but the survey was limited to recollections about the last 5 years because of concerns about diminishing reliability of memory with increasing chronologic distance from an event.

The distribution of practice duration among respondents corresponds roughly to the age distribution of cardiothoracic surgeons in the most recent cardiothoracic surgical manpower

report [7], so the responding sample of the survey appears to be fairly representative of cardiothoracic surgeons as a whole with respect to time in practice and age.

A majority of respondents endorsed the importance of education and improved understanding of complex ethical issues in cardiothoracic surgery. This finding may be flawed by selection bias, however, because surgeons who are interested in ethics may be more likely to respond to an ethics survey than those who are less interested. The discrepancy between the number of surgeons who thought their own practices would be improved by ethics education (69%) and the number who believed that cardiothoracic surgeons in general would benefit (83%) suggests that some surgeons are either unaware of their own deficiencies or underestimate the knowledge base of others.

The ABTS certification and maintenance of certification processes have not included formal evaluation of knowledge or understanding of concepts in ethics, yet a substantial majority of respondents asserted that both processes should require demonstration of an adequate understanding of ethical issues in cardiothoracic surgery. Perhaps the ABTS should consider adding such an evaluation to certification processes.

The Ethics Forum sessions at the STS Annual Meeting have taken place at a consistent time for the past 4 years: the lunch break on Tuesday of the meeting. Because lunch is available for a fee of \$25, registration for the session has been required, so numbers of registrants for those sessions are available: 94, 106, 86, and 147 attended in 2007, 2008, 2009, and 2010, respectively. The majority of respondents have attended at least one of the previous 5 STS and AATS annual meetings, and 51% of those who attended these meetings attended a cardiothoracic surgery-related ethics session. Of those, a clear majority agreed that the sessions improved their understanding of ethical issues; nearly 80% confirmed that the debate format is a valuable educational format, and only 10% believed that the sessions did not affect their practices. The ethics presentations at annual meetings seem to be perceived as educationally effective.

Of those who attended no ethics sessions, 46% cited scheduling conflicts as the reason they did not attend. The ethics debates at STS meetings are held during lunch, so it may be difficult to find an hour that is more convenient. However, because 29% did not know that the sessions were available and in view of the generally positive response to the value of the sessions, it seems reasonable to increase the publicity about ethics sessions in communications regarding meeting programs.

A large majority of respondents read one or more of the articles in *ATS* and one or more of the articles in *JTCVS*, and a significant minority read most of the articles in both journals. This suggests that published articles on ethical topics can provide an enduring educational experience, especially because the articles in *ATS* and *JTCVS* are available to all the members of the STS and AATS, respectively.

The most serious flaw of this survey is the relatively low response rate (15.6%). This rate is consistent with response rates to previous surveys of the STS membership, but generalization of the survey findings is nevertheless questionable. Still, the Ethics Forum has reason to be encouraged by the results, because they provide some indication that its

efforts to bring controversial topics from the domain of medical ethics to the attention of cardiothoracic surgeons have had at least some beneficial effect and at best substantial influence on improving cardiothoracic surgical practice.

The Ethics Forum will continue to develop ethics sessions for oral presentation and debate at our cardiothoracic surgery meetings and to publish articles based on those and other topics in surgical ethics. It will add the numerous suggestions from this survey to its existing database of interesting and pertinent ethical topics, and continue to welcome suggestions for additional topics of current interest from readers of this journal, particularly those who did not attend oral presentations or read the Ethics Forum's contributions to the cardiothoracic surgical literature.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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