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International survey on attitudes toward ethics in health technology assessment: An exploratory study

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Objectives: The objective of this exploratory study was to survey international health technology assessment (HTA) professionals to determine attitudes toward ethics in HTA.
Methods: An exploratory, quantitative, cross-sectional study design was developed. The sample population ($n = 636$) was selected from authors of the 206 articles published in the *International Journal of Technology Assessment in Health Care* between 2005 and 2007. A survey instrument was piloted and e-mailed.
Results: The response rate was low ($n = 104$; 16.4 percent). Respondents were primarily middle-aged (46 $\pm$ 11 years) male (62 percent) health professionals from Western countries ($n = 92$; 88.5 percent), with a mean of 10 ($\pm$ 6 years) years of HTA experience. Although at least 90 percent of respondents agreed that healthcare decisions involved value judgments and that ethical analysis was important to HTA, respondents were divided as to whether normative ($n = 45$; 44.6 percent) or descriptive ($n = 38$; 37.6 percent) ethical recommendations were necessary. Most respondents ($n = 83$; 81.4 percent) believed that HTA should include citizen participation, but two thirds ($n = 67$; 67.0 percent) agreed that the final decision should be restricted to decision makers. A majority of respondents thought that ethical analysis could be discussed anywhere within the HTA process, either by an expert trained in ethics ($n = 62$; 60.8 percent) or by an external consultant ($n = 80$; 78.4 percent).
Conclusions: This study showed that ethical discourse in HTA is constrained by practical considerations, which serves to limit moral inquiry. To increase ethical analysis, a positive attitude toward ethics needs to be fostered within the HTA community.

Keywords: Bioethics, Health technology assessment, International survey

From its development in the 1970s, health technology assessment (HTA) has focused more on clinical and economic outcomes than ethical analysis (6). In 2003, a survey by the International Network of Agencies for Health Technology Assessment (INAHTA) reported that 80 percent of HTA agencies considered ethical issues to be an integral part of their assessment (7).

This study was completed as part of a dissertation for the Erasmus Mundus Master of Bioethics program (2007–2008). The authors report no other conflicts of interest.

Over the past four decades, different procedures to assess ethical issues in HTA have been published (1;9;10). In 2005, Hofmann contributed a comprehensive list of thirty-three questions that focused on general and specific ethical issues in HTA (6); this framework was adopted by INAHTA for their final annual report (2005) on handling ethical issues (8). The European Network for Health Technology Assessment (EUnetHTA) recently initiated a joint project to develop a pedagogical background and a practical framework on how to approach ethical analysis in HTA (4). The inclusion of ethical assessment in HTA also is explicitly addressed in at least one consensus statement about HTA best practices (2).

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Methods for assessing ethical implications of health technology are relatively undeveloped (11) if compared with other areas concerning HTA, and a valid question remains whether procedures for handling these ethical issues can be implemented (5). As a result, this study was designed to examine current international attitudes toward ethics in HTA.

METHODS

An exploratory, quantitative, cross-sectional study design was developed around an international e-mail survey questionnaire. Questions were developed by the authors and then piloted in January 2007 to former graduates and scholars of the Ulysses Program (International Master's Degree in HTA) as well as to experts in ethics and social sciences. The pilot survey was reviewed and discussed by 10 participants, and the questionnaire was revised accordingly.

The sample population included all authors (primary and co-authors) who published articles in the *International Journal of Technology Assessment in Health Care* (IJTAHC) within a 3-year time period (2005–2007). In all, 216 published articles were identified (73 in 2005, 73 in 2006, and 70 in 2007), and 206 articles were selected based on the sole inclusion criteria of having the author(s) e-mail address within the published article. The number of authors identified was 716, but 80 authors could not be reached; thus, $n = 636$ corresponds to the entire population.

RESULTS

The survey questionnaire was e-mailed to the entire population between February and March 2007. A total of 104 authors (16.4 percent) responded.

Demographics

The respondents were predominantly male (62 percent) professionals, with a mean age of 46 years (range, 35 to 57 years), and mean HTA experience of 10 years (range, 4 to 16 years). Most respondents were from the European Union ($n = 67$; 64.4 percent), followed by North America ($n = 25$; 24.0 percent) and Australia ($n = 6$; 5.8 percent).

The majority of respondents worked in medicine ($n = 42$; 40.4 percent) or other health professions ($n = 21$; 20.2 percent), while a significant number were employed as health economists ($n = 24$; 23.1 percent) or in the social sciences ($n = 11$; 10.6 percent) (Figure 1). Most respondents ($n = 84$; 82 percent) collaborated either on a specific HTA report or participated in the HTA process.

General Attitudes Toward HTA Issues

Although at least ninety-three respondents (90.3 percent) indicated that four HTA issues (i.e., clinical effectiveness, clinical safety, economical impact, and ethical analysis) were of

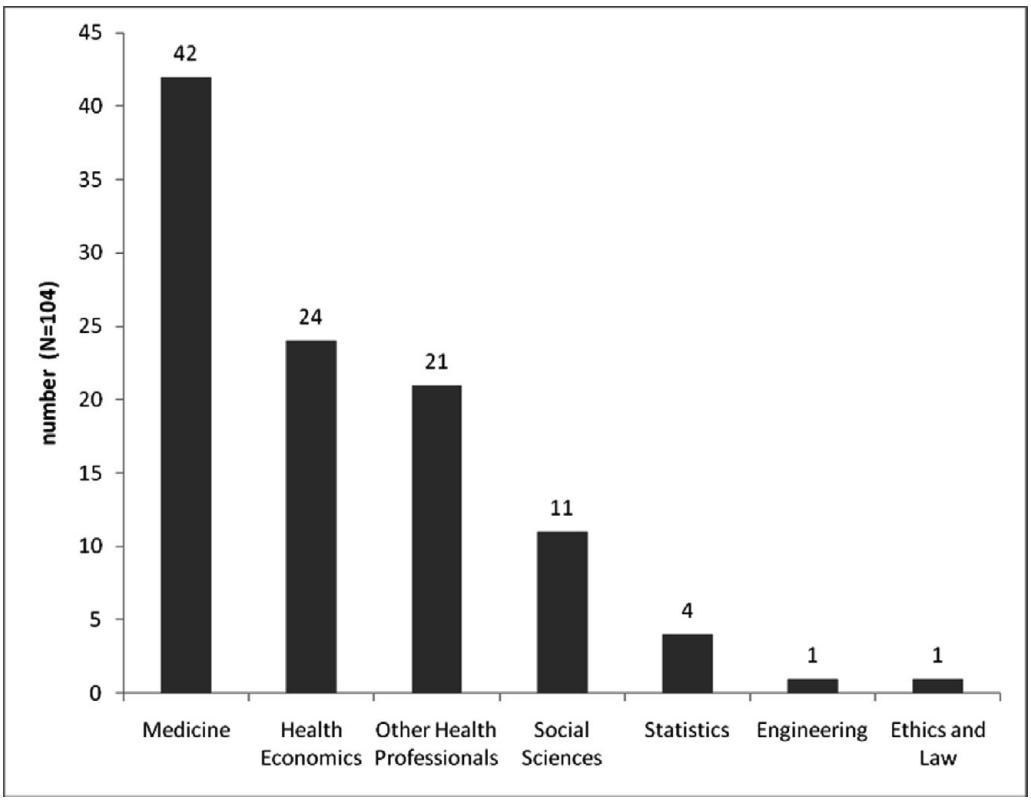

Figure 1. Respondents' professional backgrounds.

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Table 1. Do You (Dis)Agree with the Following Statements? (Survey Question 8)

	Strongly disagree *n* (%)	Disagree *n* (%)	Neither disagree or agree *n* (%)	Agree *n* (%)	Strongly agree *n* (%)	Total *n* (%)
HTA should only be focused on effectiveness, safety, and the economic impact of technologies.	34 (33.0)	36 (35.0)	5 (4.9)	24 (23.3)	4 (3.9)	103 (100.0)
HTA should only identify the ethical issues related to a specific technology and describe them in the report.	37 (36.6)	20 (19.8)	13 (12.9)	24 (23.8)	7 (6.9)	101 (100.0)
HTA should not be concerned about the ethical implications of a technology.	64 (63.4)	27 (26.7)	4 (4.0)	5 (5.0)	1 (1.0)	101 (100.0)
Whether or not a technology is used should be decided by political system or by the relevant decision makers.	10 (10.0)	14 (14.0)	9 (9.0)	41 (41.0)	26 (26.0)	100 (100.0)
HTA should provide normative recommendations about the use of a specific technology based on an ethical analysis.	14 (13.9)	24 (23.8)	18 (17.8)	38 (37.6)	7 (6.9)	101 (100.0)
HTA should include the participation of citizens and other stakeholders regarding the ethical issues of a specific technology.	2 (2.0)	7 (6.9)	10 (9.8)	54 (52.9)	29 (28.4)	102 (100.0)
The identification and interpretation of what exactly constitutes benefits and harms is not merely a technical issue but involves value judgments.	1 (1.0)	5 (5.0)	2 (2.0)	29 (28.7)	64 (63.4)	101 (100.0)

Note. HTA = health technology assessment.

equal importance, 70 respondents (68.0 percent) disagreed when asked if HTA should focus exclusively on clinical effectiveness, clinical safety, and economical impact in place of ethical analysis (see Table 1). Furthermore, ninety-one respondents (90.1 percent) disagreed with the statement that HTA should not be concerned about the ethical implications of a technology, even though approximately one-third ($n = 31$; 30.7 percent) of all respondents agreed that ethical issues associated with a specific technology should be identified and described in an HTA report. Respondents were divided as to whether HTA should provide normative ($n = 45$; 44.6 percent) or descriptive ($n = 38$; 37.6 percent) recommendations as to the ethics of a specific technology, with eighteen respondents (17.8 percent) unwilling to express a preference.

Although a clear majority of respondents ($n = 83$; 81.4 percent) believed that HTA should include participation from citizens and other stakeholders about ethical issues surrounding a specific technology, two-thirds ($n = 67$; 67.0 percent) also agreed that the ultimate decision regarding use of any technology should be restricted to decision makers or the political system. This dichotomy is reflected in attitudes about the influence of values in scientific disciplines; almost all respondents ($n = 93$; 92.1 percent) believed that benefits and risks in health care cannot be interpreted solely as technical issues but also involve value judgments (see Table 1).

Specific Attitudes Toward Ethics in HTA

Table 2 reveals professional attitudes toward ethics in HTA. More than half of all respondents ($n = 59$; 58.4 percent) believed that, although ethical issues should be an integral part of the HTA procedure, ethical assessment should be performed by the usual HTA experts involved in the process. However, approximately the same number of respondents ($n = 62$; 60.8 percent) thought that at least one of the HTA experts should have formal training in ethics. If no expert with formal training was available, then a majority of respondents ($n = 80$; 78.4 percent) considered that a professional ethicist should be hired as an external consultant to the review process when it was deemed important to do so. Less than half of all respondents ($n = 50$; 49.0 percent) believed that an HTA report needed a separate peer review that focused specifically on ethical issues.

DISCUSSION

A consensus exists that ethical analysis is important in HTA; the difficulty remains how specific recommendations may be implemented. This difficulty may be underscored by considering the slight emphasis placed on HTA ethics in applicable journals. From 2005 to 2007, for example, only five articles (2.4 percent) published in IJTAHC addressed ethical issues; nearly half ($n = 98$; 47.6 percent) focused on

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Table 2. Do You (Dis)Agree with the Following Statements? (Survey Question 9)

	Strongly disagree *n* (%)	Disagree *n* (%)	Neither disagree or agree *n* (%)	Agree *n* (%)	Strongly agree *n* (%)	Total *n* (%)
The analysis of the ethical issues should be an integral part of the HTA procedure and done by the usual experts involved.	4 (4.0)	18 (17.8)	20 (19.8)	45 (44.6)	14 (13.9)	101 (100.0)
Among the experts doing the HTA procedure, at least one of the members should have training in ethics.	1 (1.0)	18 (17.6)	21 (20.6)	42 (41.2)	20 (19.6)	102 (100.0)
A professional ethicist, as an external consultant, should be consulted during the HTA process when it is considered necessary.	1 (1.0)	10 (9.8)	11 (10.8)	49 (48.0)	31 (30.4)	102 (100.0)
A sensitive HTA report should have a separate peer review assessment focusing especially on the ethical issues.	5 (4.9)	23 (22.5)	24 (23.5)	43 (42.2)	7 (6.9)	102 (100.0)
HTA should be conceptualized as a two-phase process in which the first phase involves technology issues as safety, efficacy, and economical outcomes and the second evaluating the wider social and ethical impact of the technology.	17 (16.7)	20 (19.6)	17 (16.7)	30 (29.4)	18 (17.6)	102 (100.0)

Note. HTA, health technology assessment.

health economics, while eighty-nine articles (43.2 percent) concentrated on methodology and healthcare management. If publication patterns reflect HTA attitudes, then it is likely that the lack of focus is directly related to the limited time spent in deliberating upon the role of ethical analysis in HTA.

Respondents tended to interpret ethical deliberation as an open process, where viewpoints from a diverse population could be solicited and weighed. Although the need for consensus was not explicitly mentioned, it is significant that 81.4 percent of all respondents felt positively that HTA should include participation from citizens and other stakeholders about the ethical issues surrounding a specific technology, even if the ultimate decision regarding a report and/or a recommendation was made by HTA professionals.

While most respondents believed that ethical analysis could be discussed at any part of the HTA process, the greatest agreement (93.0 percent) came when considering the impact of a technology on society. From a consequentialist–utilitarian perspective, this option is quite sensible: there are always consequences for implementing new technologies, and society is often obliged to maximize utility by balancing the need for a technological improvement with its usefulness. Thus, the economic aspects of the ethical decision should not be minimized.

Traditionally, HTA professionals have been concerned more with means than ends—with subjecting decisions to technical analysis rather than understanding the values inherent in all choices. Health, however, is not a scientific or technical activity, nor can values be analyzed solely by strict clinical or economical assessments—especially when a concept such as "quality of life" does not explicitly include variables such as human rights or human dignity. While respondents agree that it is important to give justified arguments for any HTA recommendation, often the end result is limited by what can be performed on a technical level; in essence, moral inquiry is avoided (3;12). To make ethical assessment practical within HTA, a genuine positive attitude toward ethics as a discipline needs to be encouraged.

As noted by a majority of respondents ($n = 80$; 78.4 percent), a professionally trained ethicist would enrich the HTA process. An external consultant trained in ethics would help HTA professionals gain respect for opposing viewpoints, accept a certain level of intellectual humility, and reach decisions that serve the best interests of society.

As with any exploratory study, two limitations in this research need to be discussed. First, the survey questionnaire was designed to solicit the opinions of international HTA scholars, as identified through recent publications, and not on HTA organizations or HTA units. Thus, the opinions obtained reflected individual beliefs and biases and not those of the operating structure. Second, the survey questionnaire was distributed by means of e-mail; although this method has the value of expediency, it also may account for the relatively low absolute response rate. Nevertheless, the underlining value of this exploratory study was that it explored the role of ethics in HTA in a manner not previously emphasized in the literature.

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CONCLUSION

This exploratory study investigated international attitudes toward ethics in HTA in a small sample population. Most respondents believe that ethical analysis in HTA is necessary, but limited by practical considerations. To increase ethical analysis, a positive attitude toward ethics needs to be fostered within the HTA community.

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CONFLICT OF INTEREST

All authors report having no potential conflicts of interest.

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