



Reflections in Internal Medicine

Content analysis of ethical codes written by medical students compared with other codes of medical ethics

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ABSTRACT

Introduction: Swearing to a medical oath is a common practice in medical schools today. Students at the Medical School for International Health (MSIH) participate in an elaborate physician's oath ceremony held in the first year of studies. At this ceremony, students read a code of ethics written by their class, the content of which includes the ethical principles the class as a whole deems significant.

Methods: 9 codes of ethics, written by students at the MSIH between 1998 and 2006, as well as the oaths of Hippocrates and Maimonides, were collected and the principles contained within them were analyzed and compared. The oaths were broken up into preamble, covenant, code, and peroration sections, each encompassing various content domains.

Results: Principles discussed in both the oaths of Hippocrates and Maimonides, as well in two-thirds or more of the student-written codes, included loyalty to one's colleagues, the profession, and one's teachers, as well as acting with beneficence. Attributes including compassion, integrity, and honesty, were mentioned in two-thirds or more of the student-written codes but neither the oath of Hippocrates nor Maimonides. Controversial issues, such as abortion and discussing God were not included in codes written by students.

Conclusions: Ethical codes written by students at the MSIH contained some similar principles to those contained within the traditional oaths; however, there was more emphasis on attributes that establish a good physician-patient relationship in the codes written by students. Future studies need to examine the content of other student-written codes.

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1. Introduction

The role of a health care professional yields the potential for misuse of their awesome responsibilities. Thus, since the beginning of the profession, ethical codes in medicine have provided a structure of conduct by which physicians are expected to adhere. Codes of ethics often reflect important issues in medicine of the time and location in which they are written.

The earliest known code of medical ethics, the Hippocratic Oath, was written 2500 years ago in ancient Greece and continues to influence Western medical practice today [1,2]. The Hippocratic Oath, originally written to protest common practices like abortion, has been revised numerous times to reflect the prevailing ethics in medicine of the time. The Hippocratic Oath has regained significant popularity in the 20th century [3]. Another widely used ethical code is the Prayer of Moses Maimonides. This code, most likely written by Marcus Herz, an

eighteenth century German-Jewish physician [4], requests God's assistance and intervention in medical practice.

Swearing to uphold the principles contained in a medical oath has become a common practice in medical schools today [1]. Over half of all allopathic medical schools in the U.S. use the original Hippocratic Oath, or a modified form of the Hippocratic Oath [3]. In recent years, the relevance of swearing to such oaths has been questioned, particularly when the students are coerced into taking standard oaths [5].

Recently, especially since the establishment of the white coat ceremony, codes of ethics written by medical students have gained increasing prevalence in U.S. and European medical schools [3]. Codes of ethics written by students are considered by many to be more personally relevant, and have a great impact on both the students and their patients [5]. During the white coat ceremony, first-year medical students vow to adhere to the principles contained in the Hippocratic, or another, medical oath. The white coat ceremony is traditionally held prior to clinical exposure, reflecting the significance of adhering to a code early in one's medical education. Currently, over 100 medical schools in the U.S. hold a white coat ceremony for first-year students, and for 30 U.S. schools, the codes are written by students and/or faculty [3].

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Table 1

Section: preamble	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total no. (%)	Hippocrates	Maimonides
Promise to God or gods	–	–	–	–	–	–	–	–	–	0 (0)	+	+

Students at the Medical School for International Health (MSIH), a joint collaboration between Ben-Gurion University of the Negev Faculty of Health Sciences and Columbia University Medical Center, take a medical oath during a white coat ceremony at the beginning of their medical studies. The oath was written by Professor Lipman Halperin for Israel's first graduating medical school class, Hebrew University in Jerusalem, in 1952. The swearing of this oath at the beginning of clinical studies in the 4 year, American-style M.D. program, had been a longstanding tradition in the Israeli counterpart medical program. This tradition was established by Moshe Prywes, the first dean of Ben-Gurion University's medical school in 1974 [6].

Since its inception in 1998, students in each class at the MSIH have also written their own code of medical ethics based on principles they deemed most important. This tradition, which was similarly adopted from the Israeli counterpart program at Ben-Gurion University, is written in the first month of studies without the feedback or input from faculty. The ethics code is read by a representative of the class each year at the white coat ceremony, and each student from the class later signs the code.

The purpose of the current study was to compare the principles discussed in each of the ethics codes written by students at the MSIH between the years of 1998 and 2006, and to compare these principles with other codes of medical ethics, including the Oath of Hippocrates and the Oath of Moses Maimonides. To the best of our knowledge, this is the first study that systematically compares these ethical codes.

2. Methods

The codes of ethics written by each class at the MSIH, between the years of 1998 and 2006 were collected to be analyzed. The codes of Moses Maimonides and Hippocrates were also used.

We adopted Baker's basic framework of medical oaths [7] to compare the different ethics codes. According to Baker, medical oaths typically contain four sections: (1) a preamble, in which gods are called upon as witnesses for the oath, (2) a covenant, which states one's duties to the profession (3) a code, which states one's duties to his or her patients, and (4) a peroration, which affirms one's status upon adhering to the oath.

Each section was divided into several content domains, adopted from domains used by Kao et al. [3]. In the preamble section, the codes were examined for mention of a promise to God or gods, and in the covenant section, the codes were examined for mention of the writers' loyalty to their colleagues, the profession, or teachers. The domains within the code section reflect various attributes the writers felt that a physician should encompass, and in the peroration section, the codes were examined for discussion of reward for adhering to the oath or sanction for violating the oath. The frequencies within each of the domains were calculated for the different student-written codes at the MSIH, and compared with the frequencies within the domains for the codes that were not written by students.

3. Results

A review of each of the oaths (see Table 1) revealed that both Hippocrates and Maimonides contained a preamble section, swearing to

God or gods the principles contained with the oaths. However, there was no mention of God or gods in any of the codes of ethics written by students at the MSIH. A covenant section, in which loyalty is professed to one's colleagues, profession, or teachers, was mentioned in some way in both the oath of Hippocrates and Maimonides, and 8 of 9 classes at the MSIH (see Table 2).

Within the code section of each oath, a number of different attributes that physicians are expected to adhere to are discussed (see Table 3). The oath of Maimonides and oath of Hippocrates both included that physicians should act with beneficence, and 8 codes of ethics written by students at the MSIH (88.9%) shared this sentiment. Similarly, both the oath of Hippocrates and the oath of Maimonides promote unbiased treatment of patients, while 2 codes of ethics written by students at the MSIH (22.2%) included this attribute.

Other qualities mentioned in at least 6 codes written by students at the MSIH included that physicians should act with compassion towards their patients (77.8%), integrity (66.7%), and honesty (66.7%). None of these 3 qualities was mentioned in the oath of Hippocrates or the oath of Maimonides.

There were several qualities that were deemed important by the oaths of Hippocrates or Maimonides, which were included in 3 or fewer of the codes written by students in the MSIH. Discussed in the oath of Hippocrates is the importance of using one's good judgment, to act with morality, to honor or preserve human life, to maintain appropriate relationships with patients, and to act with nonmaleficence. These attributes are mentioned in only 2 (22.2%), 2 (22.2%), 2 (22.2%), 1 (11.1%), and 1 (11.1%) of codes written by the students at the MSIH, respectively. Similarly, the oath of Maimonides discussed that one should act with wisdom, compared with only 1 (11.1%) of the student-written codes. The prohibition of abortion was argued in the Hippocratic Oath, but was not mentioned in any of the codes of ethics written by students.

Maintaining patient confidentiality and a dedication to life-long learning were mentioned in either the codes of Hippocrates or Maimonides, respectively, as well as in 4 (44.4%) of the codes written by students. Several additional principles were discussed student codes, but not in the codes of Hippocrates or Maimonides. 5 codes written by students (55.5%) included such ideas as acting with humility, as well with empathy, sensitivity, and understanding. Similarly, 4 codes written by students (44.4%) included respect of patients, commitment to self-improvement, and a commitment to excellence. There were several other principles that were discussed in 3 or fewer of the codes written by students and not in either the Hippocratic Oath or the Prayer of Maimonides.

Content analysis of the peroration sections of the oaths (see Table 4) revealed that only the Hippocratic Oath discussed a reward for those who adhere to the principles contained within the oath. The Hippocratic Oath further discussed sanction for violating the oath; similarly, 6 codes written by the students (66.7%) mentioned some form of punishment or accountability for failure to abide by the codes' principles. The oath of Maimonides did not contain a peroration section.

4. Discussion

It has been argued that oaths written by students have more meaning to the students and their patients than when students are

Table 2

Section: covenant	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total no. (%)	Hippocrates	Maimonides
Loyalty to colleagues, profession, and teachers	+	+	+	+	–	+	+	+	+	8 (88.9)	+	+

Table 3

Section: code	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total no (%)	Hippocrates	Maimonides
Act with beneficence	+	+	+	+	+	+	+	+	–	8 (88.9)	+	+
Compassion towards patients	+	+	+	+	+	+	–	–	–	7 (77.8)	–	–
Act with integrity	+	+	+	+	+	+	–	–	–	6 (66.7)	–	–
Act with honesty	–	+	+	+	–	+	+	+	–	6 (66.7)	–	–
Act with humility	–	–	+	+	+	+	+	–	–	5 (55.6)	–	–
Act with empathy/sensitivity/understanding	+	–	–	–	+	+	+	–	+	5 (55.6)	–	–
Act with professionalism/professional conduct	+	–	–	+	–	+	+	–	–	4 (44.4)	–	–
Maintain patient confidentiality	–	+	+	+	–	–	–	+	–	4 (44.4)	+	–
Dedication to life-long learning	–	–	+	+	+	–	–	–	–	4 (44.4)	–	+
Respect of patients	–	+	–	+	–	+	–	–	+	4 (44.4)	–	–
Commitment to self-improvement	+	+	–	+	–	–	+	–	–	4 (44.4)	–	–
Commitment to “excellence”	+	–	+	+	–	–	+	–	–	4 (44.4)	–	–
Contribute/commitment to global health	–	–	–	+	–	+	–	+	–	3 (33.3)	–	–
Strive for patients’ trust/respect/gratitude	–	–	+	+	–	–	–	+	–	3 (33.3)	–	–
Unbiased treatment of patients	–	–	–	–	–	+	–	+	–	2 (22.2)	+	+
Act with discretion/good judgment	+	–	–	–	–	–	+	–	–	2 (22.2)	+	–
Act with morality	–	–	–	–	–	+	–	+	–	2 (22.2)	+	–
Honor/preserve human life	–	–	+	–	+	–	–	–	–	2 (22.2)	+	–
Maintain sense of humor	–	–	+	+	–	–	–	–	–	2 (22.2)	–	–
Strive for adequate physician–patient communication	–	–	+	–	–	–	+	–	–	2 (22.2)	–	–
Create positive learning experience	–	+	–	+	–	–	–	–	–	2 (22.2)	–	–
Act with the patients’ best interests/needs	–	–	–	–	–	+	+	–	–	2 (22.2)	–	–
Learn from colleagues’ mistakes	–	+	+	–	–	–	–	–	–	2 (22.2)	–	–
Commitment to own health/well being	–	–	–	+	–	–	+	–	–	2 (22.2)	–	–
Maintain appropriate relations with patients	–	–	–	+	–	–	–	–	–	1 (11.1)	+	–
Act with wisdom	–	–	–	+	–	–	–	–	–	1 (11.1)	–	+
Act with sincerity	–	–	–	–	+	–	–	–	–	1 (11.1)	–	–
Comfort the dying	–	–	–	–	–	+	–	–	–	1 (11.1)	–	–
Commitment to patients’ health	+	–	–	–	–	–	–	–	–	1 (11.1)	–	–
Act with nonmaleficence, “do no harm”	–	+	–	–	–	–	–	–	–	1 (11.1)	+	–
Prohibition of abortion	–	–	–	–	–	–	–	–	–	0 (0)	+	–

forced to take other standard oaths [5]. Similarly, examination of codes written by students allows one to appreciate the ethical principles that students feel are most important. There is great significance, therefore, to the autonomy given to each class at the MSIH when writing the code of ethics. Students work together to discuss what attributes they feel should be included, and finish the final code together without any input from the faculty.

Having students write these codes immediately upon beginning their medical education is quite significant as well. A study conducted at the Ben-Gurion University’s medical school discussed the importance of students taking an oath at the beginning of their medical studies, rather than later in course of their studies [8]. It was shown that most students initially had positive feelings towards taking an oath; however, these positive feelings progressively declined following the first year of studies. Although most students could not recall specific details contained within the oaths, the tradition of taking the oath was still emotionally significant to the students.

Analysis of the various codes of medical ethics makes it possible to compare the principles that were important in ancient times with those that important to students in modern times. We examined those principles that were discussed in at least two-thirds of codes written by students, as well as in either the oaths of Hippocrates, Maimonides, or both. Loyalty to one’s colleagues, profession, and teachers, and acting with beneficence were included in both the oath of Hippocrates and Maimonides, as well as in 88.9% of codes written by students. Accountability and sanction for violating the oath was similarly discussed in the oath of Hippocrates, as well as in the majority of student-written codes (66.7%).

Principles that establish a good physician–patient rapport, including compassion, integrity, and honesty, were discussed in at least 6 of the

codes written by students but were included in neither the Hippocratic Oath nor the Prayer of Maimonides. It has been demonstrated that patients feel that the practice of humanistic medicine is important [9], so it is not surprising that medical students place great significance on those attributes that demonstrate a positive bedside manner. The importance of physicians maintaining the specific characteristics of compassion, integrity, and honesty has been previously documented as well [10] further emphasizing their relevance.

Patient confidentiality and a dedication to life-long learning, discussed in the oath of Hippocrates and Maimonides respectively, were also mentioned in several of the codes written by students. Thus, it is apparent that these issues continue to be relevant in modern times. Patient confidentiality, while important in establishing a trusting relationship between the physician and patient, has legal implications today as well. Likewise, as medicine is constantly changing and advancing, a dedication to life-long learning is as relevant today as it was hundreds of years ago.

The Hippocratic Oath is the only oath we examined that prohibited abortions. Intuitively, controversial issues like abortion should not be included in a code that represents an entire class. Similarly, not one code written by students contained mention of God or gods, in contrast with both the oath of Hippocrates and oath of Maimonides.

The oath of Hippocrates, which prohibits inappropriate relations with patients, was only discussed in one of the codes written by students. Inclusion of this idea in medical oaths is also somewhat controversial, and has been largely debated [11]. Whether this prohibition should be included in medical oaths is currently being examined from an ethical and legal perspective [11].

Neither the Hippocratic Oath nor oath of Maimonides mentioned a commitment to international health; similarly, only 3 classes (33.3%)

Table 4

Section: peroration	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total no. (%)	Hippocrates	Maimonides
Reward for adhering to the oath	–	–	–	–	–	–	–	–	–	0 (0)	+	–
Sanction for violating oath; accountability for one’s actions	+	+	+	+	–	–	+	+	–	6 (66.7)	+	–

at the MSIH discussed this in their codes of ethics. Given the nature of the program and its focus on International Health, the MSIH tends to attract students with a passion for global health. Thus, it was somewhat surprising that more of their codes of ethics, which discussed other attributes they felt strongly about, did not include mention of a commitment to global medicine.

Our study had some limitations. Interpretation of the content contained in each of the oaths is somewhat subjective, especially when the wording contained in the oath was vague. Furthermore, the present study's analysis is limited to codes of ethics written by students at the MSIH. Future research should examine the content contained in other student-written medical oaths.

5. Learning points

- Ethical codes written by medical students contain similar principles to those contained within the traditional oaths of Hippocrates and Maimonides.
- Student written codes emphasized attributes that contribute to a good physician–patient relationship.
- Controversial ethical and moral issues were for the most part not included in the student–written codes.

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