



Contemporary Medical Students' Perceptions of the Hippocratic Oath

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Abstract

Background: The Hippocratic Oath is a standard of medical ethics. Oath adaptations are common. Objective: Evaluate students' perceptions regarding the oath. Design: Survey of University of California, Los Angeles (UCLA) Medical School graduating students regarding the oath's relevance, content, and application, and whether a choice of version should be provided.

Results: Forty-two of the fifty-three students (79 percent) considered the original oath relevant. Most (53 percent) disagreed that the oath in its original form be used, and most preferred a modified oath. More agreed (40 percent) than disagreed (28 percent) on providing a choice of version of the oath. The mean of correct answers as to the original oath's contents was 68 percent. Euthanasia and abortion prohibitions were recognized by 68 percent and 62 percent, respectively. Increased knowledge of the original's contents correlated with decreased desire that it be used ($p = .02$). Recognition of euthanasia/abortion prohibitions was significantly better for those in disagreement than in agreement that the original be used. Those who disagreed that a choice of oath versions be provided had significantly better knowledge of the original's euthanasia/abortion prohibitions than those who agreed. However, those who felt strongly that a choice should or should not be given each had a 100 percent accuracy of identifying euthanasia/abortion prohibitions.

Conclusions: Most students preferred an adapted oath to the original. Increased student knowledge of the original oath's contents, including reference to euthanasia/abortion, significantly correlated with decreased desire to use it. Given the original's importance in medical ethics, this is concerning. A subset of students, however, affirmed the original's value and desired its use. Improved education in the Hippocratic oath is important, given modern medicine's complex moral issues.

Summary: The Hippocratic oath is a standard of medical ethics. Oath adaptations eliminating the original's prohibitions of abortion/euthanasia are common. Most medical students who were questioned preferred the adapted oath to the original. Only two-thirds recognized the original's prohibitions of abortion/euthanasia. Those who knew of the original oath's prohibitions also had a decreased desire that it be used. Students disagreeing that a choice of versions of the oath be provided had better knowledge of these prohibitions. This is concerning, given the original oath's importance in medical ethics including at the 1945–1949 Nuremberg trials. Nonetheless, a subset of students affirmed the original Hippocratic oath's importance, desiring its use.

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Introduction

The Hippocratic oath has achieved rightful stature as an ethical guide for physicians for millennia (Cameron 1991). Modern medical students' views of the oath would seem important, considering health-care legislative changes mandating abortion/contraception coverage, efforts to limit conscientious objection, and legalizing euthanasia.

Our study queried whether students view the original Hippocratic oath as relevant compared to modified forms, whether the original should be taught or recited at all, and whether students should be given a choice of versions of the oath. We assessed students' grasp of the actual contents of the original oath and its applicability to various ethical scenarios, with special consideration to the Nuremberg trials, physician-assisted suicide, and abortion.

Materials and Method

In March 2015, an electronic questionnaire ("SurveyMonkey" platform) was re-sent to the 195 graduating students of the UCLA School of Medicine (102 male and 93 female) and resent twice more over two months to improve response yield. The questionnaire reproduced the original Hippocratic oath (Adams 1849; Appendix A) and a modernized, adapted version of the oath (Chaney 2017; Appendix B). The UCLA Medical School recited the original oath at their Hippocratic oath graduation ceremony until the late 1980s; it was then adapted to the modified version and continues to be recited. Students were asked whether they had previously read the original oath, how relevant they thought it was, and whether all medical schools should provide the opportunity to learn about the original oath and in what setting. Further questions were whether the original oath should be used at graduation, whether the adapted oath eliminated important components of the original, whether the adapted version is more meaningful than the original, and whether students should be given a choice of versions of the oath. Next, to assess students' knowledge of the original oath's contents, twelve statements were posed, and the students asked which are stipulated within the original. The statements included the following: maintain accurate medical records; consider those you instruct as dear as your parents; follow the

treatment plan which you consider best for your patients; abstain from whatever is deleterious, mischievous, and corrupt; do not provide euthanasia; do not provide abortion; pass one's life and practice medicine with purity and holiness; do not perform surgery unless you are a surgeon; avoid seducing females or males; maintain patient and professional confidentiality; allow one to enjoy life and medicine if the oath is upheld; disallow one to enjoy life and medicine if the oath is violated. To achieve a score of 100 percent, all statements except the first (maintenance of medical records) were considered as being stipulated in the oath.

Students were then asked whether eleven specific events violated or exposed violations of the original oath. These included Salk polio vaccine trials (Meldrum 1998), Nuremberg medical trials (Ivy 1949), wrong-eye surgery and altered medical records (Harbin 2009), Kermit Gosnell abortion and infanticide murder trial (Friedersdorf 2013, Taranto 2013), Tuskegee syphilis experiments (Meyer 1981), physician-assisted suicide (Physician-assisted Suicide 2013; Colbert, Schulte, and Adler 2013), California forced-sterilization practices in prisons and mental institutions (Stern 2005), withholding nutrition and hydration from patients in a chronic vegetative state (e.g., Terri Schiavo case; Fine 2005), unnecessary cardiac surgeries done on normal patients (Klaidman 2008), New York lawsuit detailing organ harvesting from patients not yet meeting the criteria of brain death (Schram 2012), and China's forced one-child limit family policy (Kane and Choi 1999).

Opportunity for student commentary was provided. Statistical analyses were done using two-tailed Fisher's exact and unpaired *t*-test. Institutional review board (IRB) approval was obtained from Harbor-UCLA BioMed and UCLA.

Results

Of the 195 students, 53 responded (27 percent). Only 17 (32 percent) had previously read the original Hippocratic oath. Thirty-three (62 percent) considered the original Hippocratic oath moderately relevant to modern medicine, 11 (21 percent) not at all or not very relevant, and only 9 (17 percent) extremely relevant (Table 1). Thirty-six (68 percent) felt that all medical schools should include the

Table 1. Students' Opinions of the Relevance of the Original Hippocratic Oath in Modern Medicine.

Extremely relevant	9 (17%)
Moderately relevant	33 (62%)
Not very relevant	10 (19%)
Not at all relevant	1 (2%)

Note: $n = 53$.

Table 2. Students' Opinions Whether All Medical Schools Should Provide a Chance to Learn About the Original Oath.

Yes	36 (68%)
No	7 (13%)
Unsure	10 (19%)

Note: $n = 53$.

opportunity for students to learn about the original oath, but nearly one-third were unsure or did not think such opportunity should be provided (Table 2). Of the 36 who felt that all medical schools should provide such opportunity, 15 (42 percent) felt that it should be done as a historical lecture, and 13 (36 percent) felt that it should be done in the first week of medical school. Only 8 of the 36 (22 percent) felt that the timing should be at graduation.

When asked whether the original Hippocratic oath should be used, sixteen of the fifty-three students (30 percent) believed the original oath should be used, while twenty-eight (58 percent) did not. Fifteen (28 percent) strongly felt that the original should not be used (Table 3).

Eleven (21 percent) felt that important components of the original Hippocratic oath had been lost in the adapted version; twenty-three (43 percent) did not (Table 3). Looking at the twenty-eight students who did not believe that the original Hippocratic oath should be used, six (21 percent) felt that the adapted oath had eliminated important components of the original.

Most students (thirty-four of the fifty-three [64 percent]) felt that the adapted oath was more meaningful than the original (Table 3). However, twenty-one of the fifty-three (40 percent) felt that graduating students should have a choice of versions of the oath (Table 3). Fifteen (28 percent) did not feel students should be allowed a choice; seven (13 percent) felt strongly so.

Table 4 lists students' responses as to the content of the original Hippocratic oath. All statements are mentioned in the original except the first (maintenance of accurate medical records), which most

students (91 percent) recognized as not in the original. The mean number of correct answers for the fifty-three students was 8.17 of 12 (68 percent) \pm 3.14. Thirty-six (68 percent) and thirty-three (62 percent) students identified the original Hippocratic oath's prohibitions of physician-assisted suicide and abortion, respectively.

For those twenty-eight who felt that the original oath should not be used ("disagree" and "strongly disagree"), the mean number of correct answers for what is actually stipulated in the oath was 9.2 of 12 (76.5 percent) \pm 2.7. Of those sixteen who felt that the original Hippocratic oath should be used, the mean number of correct answers was 7.0 of 12 (58 percent) \pm 3.18, significantly less than those in disagreement ($p = .02$).

Of those fifteen who strongly disagreed that the original Hippocratic oath be used, the mean number of correct answers for oath contents was 10.3 of 12 (86 percent) \pm 1.95. Of those ten who strongly agreed that the original be used, the mean number was 6.5 of 12 (54 percent) \pm 2.76, significantly less than those who strongly disagreed ($p = .0005$).

Of the twenty-eight students who felt that the original oath should not be used (disagree and strongly disagree), twenty-three (82 percent) recognized the prohibitions of euthanasia and abortion. Of the sixteen students who felt that the original should be used, six (38 percent) and seven (44 percent) recognized the original as prohibiting euthanasia and abortion, respectively, significantly worse than those who felt that it should not be used ($p = .007$ for euthanasia, $p = .017$ for abortion).

Of the fifteen who strongly felt that the original should not be used, fourteen (94 percent) and fourteen (94 percent) recognized the original prohibitions against euthanasia and abortion, respectively. Of the ten who strongly felt that the original oath should be used, three (30 percent) and four (40 percent) correctly recognized the original prohibitions of euthanasia and abortion, respectively, significantly worse than those who felt that it should not be used ($p = .002$ for euthanasia, $p = .007$ for abortion).

There was no significant difference in overall correct identification of the original oath's contents between students who felt that a choice of versions of the oath be given versus those who disagreed (8.24 ± 3.05 vs. 9.07 ± 2.34 , respectively). There was also no significant difference in identification of oath contents between those three who strongly agreed and those seven who strongly disagreed that a choice be given (9.33 ± 2.31 vs. 8.86 ± 1.57 , respectively). However, looking specifically at physician-assisted suicide and abortion, there was a

Table 3. Students' Opinions on the Use and Meaning of the Hippocratic and Modern Oaths.

Level of Agreement	Whether the Original Hippocratic Oath Should Be Used at Graduation	Whether the Modified Oath Has Eliminated Important Components Of the Original Hippocratic Oath	Whether the Modified Oath Is More Meaningful to Today's Physician	Whether the Graduating Class Should Be Given a Choice of Versions of the Oath
Strongly agree	10 (19%)	1 (2%)	14 (26%)	3 (6%)
Agree	6 (11%)	10 (19%)	20 (38%)	18 (34%)
Neutral	9 (17%)	19 (36%)	12 (23%)	17 (32%)
Disagree	13 (25%)	14 (26%)	7 (13%)	8 (15%)
Strongly disagree	15 (28%)	9 (17%)	0	7 (13%)

Note: n = 53.

Table 4. Students' Answers as to What Is Specifically Stipulated Within the Original Hippocratic Oath.

Maintain accurate medical records	5 (9%)
Consider those you instruct as dear as your parents	36 (68%)
Follow the treatment plan which you consider best for your patients	32 (60%)
Abstain from whatever is deleterious, mischievous, and corrupt	47 (89%)
Do not provide euthanasia	36 (68%)
Do not provide abortion	33 (62%)
Pass one's life and practice medicine with purity and holiness	36 (68%)
Do not perform surgery unless you are a surgeon	36 (68%)
Avoid seducing females or males	29 (55%)
Maintain patient and professional confidentiality	36 (68%)
Allow one to enjoy life and medicine if the oath is upheld	37 (70%)
Disallow one to enjoy life and medicine if the oath is violated	27 (51%)

Note: n = 53.

significant difference in recognition between the groups. Of the fifteen students who felt that a choice of version should not be given, fourteen (93 percent) recognized the prohibition of physician-assisted suicide and fourteen (93 percent) recognized the prohibition of abortion. This was a significantly better recognition than for those twenty-one students who felt that a choice of version should be given. Of these, only twelve (57 percent) recognized the prohibition of euthanasia ($p = .025$), and eleven (52 percent) recognized the prohibition of abortion ($p = .01$).

Table 5. Students' Opinions on Whether a Particular Situation Violates or Exposes a Violation of the Original Hippocratic Oath.

Salk polio vaccine trials	8 (15%)
Nuremberg medical trials	35 (66%)
Wrong-eye surgery and altered medical records from book <i>Waking Up Blind: Lawsuits Over Eye Surgery</i>	22 (42%)
Kermit Gosnell abortion and infanticide murder trial	26 (49%)
Tuskegee syphilis experiments	41 (77%)
Physician-assisted suicide	33 (62%)
California forced-sterilization practices in prisons and mental institutions	39 (74%)
Withholding nutrition and hydration from patients in a chronic vegetative state (e.g., Terri Schiavo case)	13 (24%)
Unnecessary cardiac surgeries done on normal patients documented in the book <i>Coronary</i>	29 (55%)
New York lawsuit detailing organ harvesting from patients not yet meeting the criteria of brain death	29 (55%)
China's forced one-child limit family policy	15 (28%)

Note: n = 53.

Recognition of euthanasia and abortion prohibitions was highest for students feeling strongly one way or the other whether a choice be provided. Of the total, seven students who strongly disagreed and the three students who strongly agreed, all recognized that the original oath prohibited physician involvement in abortion and euthanasia.

Table 5 lists students' impressions whether certain historical or current events represent or expose violations of the original Hippocratic oath. The

Tuskegee syphilis experiments (77 percent) and California's forced sterilization practices (74 percent) were most commonly cited. Thirty-five (66 percent) recognized the Nuremberg medical trials exposed Hippocratic violations. Physician-assisted suicide was noted by 62 percent. About half cited the Gosnell abortion trial, the New York organ-harvesting suit, and unnecessary cardiac surgical procedures as Hippocratic oath violations. Student comments are listed in Appendix C.

Discussion

A code binding physicians requires not only voluntary and public acknowledgment but that its contents can be defended by sound moral thinking (Pellegrino 2010). The Hippocratic oath, directing physician conduct through two and a half millennia, speaks directly to current compelling medico-ethical issues.

How do modern medical students react to, interpret, and apply the Hippocratic oath? Our study is limited by the low (27 percent) response rate. Certainly, it is conceivable that the respondents themselves are a skewed subset of the overall student population (i.e., those most passionate about the Hippocratic oath, positively or negatively, would be most likely to respond). Despite these limitations, some trends in medical-student thought processes regarding the oath can be gleaned from the study.

Nearly a quarter of the responding students considered the original as not at all or not very relevant, and 13 percent felt medical schools should not even provide opportunities for students to learn about the original. Most considered the modified version as more applicable and disagreed with using the original at graduation. Although some comments left by students were supportive of the original, many were not, with some describing it as "archaic," "inapplicable," and having "flagrant sexism" (Appendix C).

The modern, Western cultural undercurrent of affluent music, sports, and entertainment industries—not uncommonly entwined in a drug, pornographic, and violent subculture—affects our thinking in no small way. Medical students, as human beings, are not exempt from such influences. But an inescapable tension then manifests since ethical medicine should be a changing moral force on society rather than the reverse (Ivy 1949; Gambrell 2000). The "general decline in moral and religious values" in Nazi Germany was felt by the expert medical witness at the Nuremberg trials, Andrew Ivy, to have led to atrocities (Ivy 1949). Is medicine held to a higher standard than our culture? Should it be?

Why? Do cultural mores dictate medical ethics or should medical ethics forge virtue in society? Could declining social-moral virtue influence medicine, which in turn would further influence society?

Our hypothesis was that increased knowledge of the contents of the original Hippocratic oath would correlate with an increased desire that it be used. The results showed the complete opposite. Those who felt that the original Hippocratic oath should not be used knew the contents of the oath significantly better than those who felt that it should be used, and the difference was even more pronounced between those who strongly felt one way or another whether the original be used. Further, those students who did not desire that the original Hippocratic oath be used, especially those who felt strongly so, recognized the original's stipulations against euthanasia and abortion significantly more often than those who desired that the original be used.

These findings are concerning given that historically, the original Hippocratic oath has been an enduring ethical standard for physicians, not the least of which included being a yardstick by which were judged medical atrocities of the last century, including those revealed at the Nuremberg trials. It is possible that many modern medical students view the Hippocratic oath as an historical relic. They are not, however, willing to discard it altogether, there remaining a sense that the oath, in some way, is vaguely relevant. The value of a nebulous Hippocratic oath remains, even if only for distant emotional, rather than acutely practical, purposes.

This phenomenon was analyzed by Lifton who, in reconciling Nazi medical killing relative to the Hippocratic principles, writes, "The oath was perceived as little more than a distant and muted ritual one had performed at medical school graduation, and was readily reversed . . . by the direct pressures and rewards in the direction of a Hippocrates-free Auschwitz" (1986, 433). Nonetheless, this ritual remained vaguely important for the Nazi physicians, and Heinrich Himmler spoke of "the great Greek doctor Hippocrates" who "proclaims a morality, the strengths of which are still undiminished today and shall continue to determine medical action and thought in the future" (Lifton 1986, 32). The Nazi physicians, somehow, invoked the Hippocratic oath while flagrantly violating it, seemingly oblivious to the overt contradiction. The internal logic of the Nazis was "the sense of recasting the medical profession . . . in the service of larger healing" and rejecting the "Christian compassion for the weak" (Lifton 1986, 32). The capacity for rationalization is

extraordinary, and our modern medicine cannot boast complete and virtuous exemption.

Should students be afforded a choice of the original or a modified oath? Forty percent of students thought so, but many did not. Those who thought a choice should be withheld knew the original's prohibitions against euthanasia and abortion significantly better than those who thought a choice should be given. Were those most in favor of "choice" in the beginning and end-of-life issues least in favor of providing choice regarding versions of the oath? Interestingly, those who felt strongly one way or another about giving a choice to students recognized without exception the prohibitions of euthanasia and abortion. There appears to be a definite subset of students, albeit in the minority, who felt that the original oath is extremely relevant in modern medicine (17 percent), strongly felt that it should be used at graduation (19 percent), and felt that the modified version eliminated important components of the original (21 percent).

The Nuremberg Trials

Indictments and judgments at the Nuremberg trials of 1945–1949 were passed for medical atrocities related to experimental research crimes perpetrated on concentration camp prisoners as well as nonexperimental crimes of mass killings, euthanasia, and abortion. The chief prosecutor at the doctors' trial made special mention that this was "no mere murder trial," as the defendants were physicians sworn to the Hippocratic oath (*United States v. Karl Brandt et al.* 1947, 27). Repeated reference was made in the trials to the oath's importance and primacy. The chief medical witness for the prosecution, Andrew Ivy, recognized "at the Nurnberg Trials the full meaning and importance of the contributions of Hippocrates and his school to medicine and human welfare He apparently realized that a scientific and technical philosophy of medicine could not survive through the ages unless it was associated with a sound moral philosophy. One cannot conceive of a sound society with medicine that does not have a sound moral philosophy. . . . Simply stated, medical ethics, or the Oath of Hippocrates, is the Golden Rule of the profession" (1949, 133). Leo Alexander, another medical expert at the trials, wrote, "temporal laws, in comparison to our Hippocratic obligation, enduring throughout the entire history of medicine are merely words written into sand" (1973, 324–25). Interestingly, the Hippocratic oath was also invoked by the defendants who protested that they had obeyed basic precepts of the oath (*United States v. Karl Brandt et al.* 1947).

Ivy at the Nuremberg trials noted that "political ideology can insidiously take over a medical profession of high ideals . . . [to] take part in atrocities and place that profession in a position where it is unable to protest effectively" (1949, 133). Most of German medicine, however, remained ethical, and some physicians protested when learning of the criminal experiments on prisoners. It was these conscientious objectors that Himmler labeled "traitors," demanding a list of these physicians with "Christian medical ideals" (Ivy 1949, 133).

Physician-assisted Suicide

Most medical students recognized that physician-assisted killing was forbidden in the original oath. In 2015, California became the fifth state to permit physician-assisted suicide. In a 2013 *New England Journal of Medicine* physician poll, 65 percent of respondents felt that physician-assisted suicide should not be permitted (Physician-assisted Suicide 2013; Colbert, Schulte, and Adler 2013). However, in another 2014 poll, 54 percent of physicians considered it permissible (Kane 2014, slide 2). Official American Medical Association (1994, 2013) policy continues to oppose physician-assisted suicide.

At the Nuremberg trials, the euthanasia and physician-assisted suicide policies were considered to be the starting point culminating in the Holocaust (Ivy 1949). Official Nazi directives were established in secret for fear of "adverse reactions from the Catholic church and other countries" (Rothman 2006, 1623). Alexander noted that the "small beginnings . . . merely a subtle shift in emphasis in the basic attitude of the physicians . . . in its early stages concerned itself merely with the severely and chronically sick It is important to realize that the infinitely small wedge-in lever from which that entire trend of mind received its impetus was the attitude toward the nonrehabilitable sick" (1949, 44).

Abortion

Although most students studied recognized that the original oath prohibited abortion, only 21 percent felt that the modified oath had eliminated important components of the original. Changes in abortion attitudes within medicine over the past century have been striking and surely influence these results. Official AMA policy of the late 1800s termed abortion the "slaughter of countless children" and labeled abortionists as "educated assassins . . . cling[ing] to a noble profession only to dishonor it"

(1871, 239–58). Notably, official AMA policy on abortion did not shift until the late 1960s.

The California Medical Association editorialized in 1967 that despite evolving abortion attitudes, the old ethic of “intrinsic and equal value” for human life had not yet been fully displaced, making “semantic gymnastics” necessary to “separate the idea of abortion from the idea of killing.” The result was a “curious avoidance of the scientific fact, which everyone really knows, that human life begins at conception and is continuous whether intra- or extra-uterine until death” (California Medical Association 1970, 68).

In keeping with the Hippocratic tradition, the prosecution at the Nuremberg trials cited Nazi abortion policy as a “crime against humanity,” a “war crime,” and an “activity marking a criminal organization,” in their indictments for which punishment was meted out (*United States v. Greifelt* 1950, 608–18; Tuomala 2011, 334–40). Nazis were indicted for “performance of abortions,” “encouraging and compelling abortions,” and denying “protection of the law . . . to unborn children” (*United States v. Greifelt* 1950, 610–11, 613–14; Tuomala 2011, 336–38). Aside from affirming the criminal nature of the act of abortion per se, the trials asserted that the mere denial of protection of the law to the unborn constituted a criminal offense. The prosecution expressly argued that abortion is a “crime against the unborn child” and summarized that abortion is an “inhumane act” and an “act of extermination,” and that if the procedure is “voluntary,” it was still “a crime against humanity” (Tuomala 2011, 337, 371, 372, 377). The Nazi defendants did not see it this way, arguing that abortion “was never considered as murder . . . [or] a crime against humanity” (Tuomala 2011, 341). Defendants were condemned for “encouraging and compelling abortions” and sentenced up to twenty-five years prison (*United States v. Greifelt* 1950, 610; Tuomala 2011, 336–37). Nazi directives to decriminalize and promote abortion in propaganda were used as evidence, as was a letter urging that women should get to know abortion “as a simple and pleasant affair” (Tuomala 2011, 358; Joseph 2009, 190). A Nazi requisite for abortion clinics was that they be “competently operated” and that “doctors must be able to help out, there being any question of this being a breach of their professional ethics” (Joseph 2009, 190, citing Wetzel 1942). Indeed, as with criminal research in concentration camps, some conscientious objectors refused to do abortions. A Nazi document introduced as evidence noted the “objections on the part of a minority of reactionary Catholic physicians” (Tuomala 2011,

360). The prosecution proposed that these physicians “argued that the decree was not in accordance with the moral obligation to preserve life” (Tuomala 2011, 360). This bears on modern conscientious-objection debates.

Ensuing international medical declarations arising directly from the Nuremberg trials all presumed the Hippocratic protection of the unborn (World Medical Association Geneva Declaration 1948; World Medical Association International Code of Medical Ethics 1949; British Medical Association 1947). The Nuremberg judgments mandated that fetal “protection of the law” be codified in the International Bill of Rights as a foundation of modern international human rights law (United Nations 1946).

Recently, the ethics of Planned Parenthood’s sale of aborted fetal tissue for research has been publicized (Center for Medical Progress 2015). Although some applaud the practice (Charo 2015; Topulos, Greene, and Drazen, 2015), none cite the Hippocratic oath, the Nuremberg trials, or the declarations arising from them. It is doubtful that the Nuremberg trial judges would have viewed these practices so benevolently, considering their judgment of Nazi abortion as a “crime against humanity” and their conclusion that the end does not justify the means.

Medical providers’ impressions of the Hippocratic oath have practical importance, not only in case-specific and physician-specific instances but in general health-care policy. A recent “Consensus Statement on Conscientious Objection in Healthcare” by prominent bioethicists has argued that the legal protection of physicians who conscientiously object to euthanasia and abortion is “indefensible” (Ballantyne et al. 2016). Doctors who refuse such procedures, they recommend, should be brought before “tribunals” and forced “to compensate society and the health system for their failure to fulfill their professional obligations . . .” Furthermore, medical students “should not be exempted from learning how to perform basic medical procedures they consider to be morally wrong.” The signatories of the consensus statement were overwhelmingly bioethicists without medical degrees, paralleling the spate of recent bioethics articles decrying conscientious objection by physicians (Savulescu and Schuklenk 2016; Schuklenk 2015; Savulescu 2006). A statement from one article (Savulescu and Schuklenk 2016, 163) that “the scope of professional practice is ultimately determined by society,” implies that the history and function of authentic medical practice as a learned

profession with Hippocratic ethics has been usurped by regulatory decree. Genuine medical care, however, is not merely determined by the mandates of the powerful. Despite the lack of practical medical provider input, the specter of integration of these recommendations by international legislative bodies remains. The matter seems eerily reminiscent of prior totalitarian regimes demanding the names of “reactionary Catholic physicians” and “traitors” with “Christian medical ideals” (Tuomala 2011; *United States v. Greifelt* 1950; Ivy 1949), who followed the Hippocratic oath and refused to do exactly what is now demanded by a segment of modern bioethics.

Conclusion

Financial gain, power, and technology for its own end are ever-willing surrogates for a medicine severed from the Hippocratic tradition. Extreme ideologies of the last century have shown how quickly and easily it is to usurp a medicine separated from its moral roots. This is apt to be even more prevalent in the context of a relativistic culture whose moral foundations are in danger of asphyxiating. History has lessons to teach us and to relinquish a noble profession to a truncated paradigm of medicine devoid of Hippocratic principles hardly seems in the best interests of current or future patients. Our study raises the possibility that many medical students do not consider the Hippocratic oath as relevant to modern medicine. If such a void does exist, this then raises the question of what moral frameworks these new physicians utilize for the ethical practice of medicine and what authority such frameworks have.

Appendix A

The Oath by Hippocrates, Translated by Francis Adams (1849)

I SWEAR by Apollo the physician, and Aesculapius, and Health, and All-heal, and all the gods and goddesses, that according to my ability and judgment, I will keep this Oath and this stipulation—to reckon him who taught me this Art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the Art

to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others.

I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous.

I will give no deadly medicine to anyone if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and holiness I will pass my life and practice my Art.

I will not cut persons laboring under the stone, but will leave this to be done by men who are practitioners of this work.

Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and, further from the seduction of females or males, of freemen and slaves.

Whatever, in connection with my professional practice or not in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret.

While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men, in all times! But should I trespass and violate this Oath, may the reverse be my lot!

Appendix B

Current Oath UCLA Adaptation

I swear by all that I hold most sacred that I will keep this enduring Oath:

To the best of my ability and judgment I will practice the Art only for the benefit of my patients. Whatever houses I may visit, I will enter only to help the sick or to prevent illness, never to inflict harm, injustice or suffering.

I will lead my life and practice the Art conscientiously and with honor.

Whatever I may see or hear in the practice of the Art or even outside of it that should not be spread abroad I will keep in solemn confidence.

I will be just and generous to those who taught me the Art, to my colleagues in the Art, and to those who desire to learn it.

May happiness and the physician’s good repute be granted me while I keep this sacred Oath inviolate.

Appendix C

Student Comments on the Hippocratic Oath

“teach the oath as a historical reference point in medicine, encourage discussion on how it is and is not relevant today. There’s no need to administer a very outdated oath that is contrary to modern medical practice to point out its value now.”

“I believe it is a fundamental cornerstone of medicine that transcends eras. It will be empowering to read the Oath alongside my fellow classmates at graduation.”

“The old Hippocratic Oath is completely archaic, not to mention its flagrant sexism.”

“The original HO includes several statements that are controversial or no longer relevant to the practice of modern medicine (euthanasia, abortion, surgery, making decisions without patient input, considering teachers = parents) and I would not feel comfortable swearing the original at any point in my training, except possibly if it was in the original Greek. I think the modified Oath is much more appropriate for the modern physician, but would prefer if it began with ‘first, do no harm.’”

“I believe the adapted oath should be taken at the start of medical school. During this time it should be noted that it is an adapted version and if the student would like to view the original oath, information to access it should be given.

The major issue I have with the original oath regards death and abortion. I believe a woman has a right to abort should she chose. The second issue I have is regarding the language used to describe giving ‘deadly medicine.’ This sentence could be misconstrued to have several meanings, one of which would include allowing a peaceful death. For example, giving an individual a much larger dose of morphine that eases their way through the dying process, but in and of itself could be considered ‘deadly.’ One could also consider certain drugs we give, such as chemotherapy, as ‘deadly.’ In my opinion, the sentence was meant to prevent providing suicide, early death, or aiding in murder. The ambiguity of the sentence in combination with the current

gray area regarding hospice care make this sentence less applicable.”

“Provide a copy with whichever modified form a school uses and consider describing why changes were made as part of the introductory week to medical school. This will put in context the oath and describe why it has been modernized. This should provide appropriate context to students, get them thinking about what their institution prioritizes, and ideally initiate discussion about whether/how the oath may further change. A full lecture would likely be too much and saying it in its original form would stay true to tradition rather than mission which should be a decision of the medical school as to their priorities.”

“I feel like this study is making this a bigger issue than it truly is. These values cannot be engrained by reading or repeating an oath; it takes real-life practice and learning. I don’t think it makes an impact on day to day practice and I wish money and time would be spent in better ways. Stick with the new version, the other version is archaic and inapplicable as is the bible.”

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