

# The relevance of the Hippocratic Oath to the ethical and moral values of contemporary medicine. Part II: interpretation of the Hippocratic Oath—today's perspective

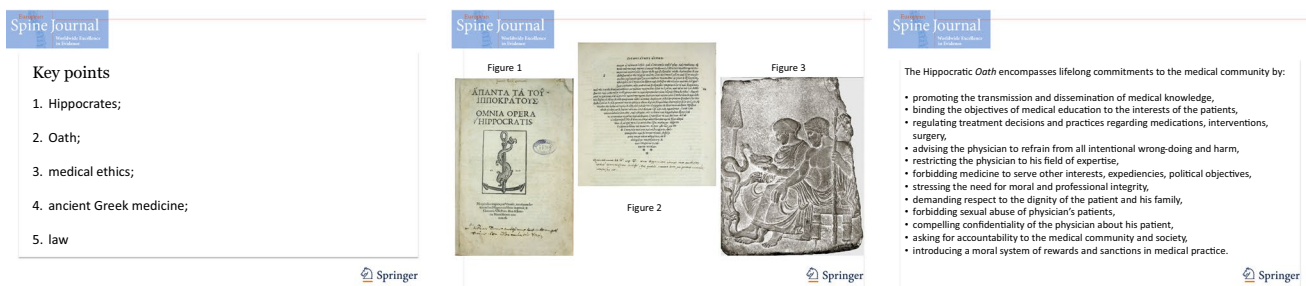
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## Abstract

This is the second part of a paper on the relevance and significance of the Hippocratic *Oath* to modern medical ethical and moral values with the aim at answering questions on controversial issues related to the *Oath*. Part I argued that the general attributes and ethical values of the *Oath* are relevant to the modern world. Part II attempts to elucidate the interpretation of the specific injunctions of the *Oath* from today's perspective in relation to ethical values concerning the duties of physicians to patients and society. The objective is to prove that the *Oath* has established the general context of medical ethics of the physician–patient relationship, which reflects long-lasting moral values that still define the medical profession. The *Oath* has exemplified the fundamental modern ethical principles of beneficence, non-maleficence and confidentiality. Its foremost message focuses on patients' best interests and not on the prohibition of surgery, euthanasia or abortion, as is generally believed. Furthermore, the *Oath* as a code of professional identity has had a powerful impact on modern judicial opinions regarding medical ethics. In a lot of ways, it is as relevant of the values of contemporary medicine as it was for ancient medicine.

**Graphical abstract** These slides can be retrieved under Electronic Supplementary Material.



**Keywords** Hippocrates · Oath · Medical ethics · Ancient Greek medicine · Law

## Introduction

Part I of the present paper discussed the general attributes and the ethical and moral values of the Hippocratic *Oath* concerning duties and commitments of physicians from Antiquity to the modern world [1]. Part II examines each passage of the *Oath* in the light of the culture of its time as well as its relevance to the ethical and moral values of present day medicine mainly in relation to some still unresolved questions.

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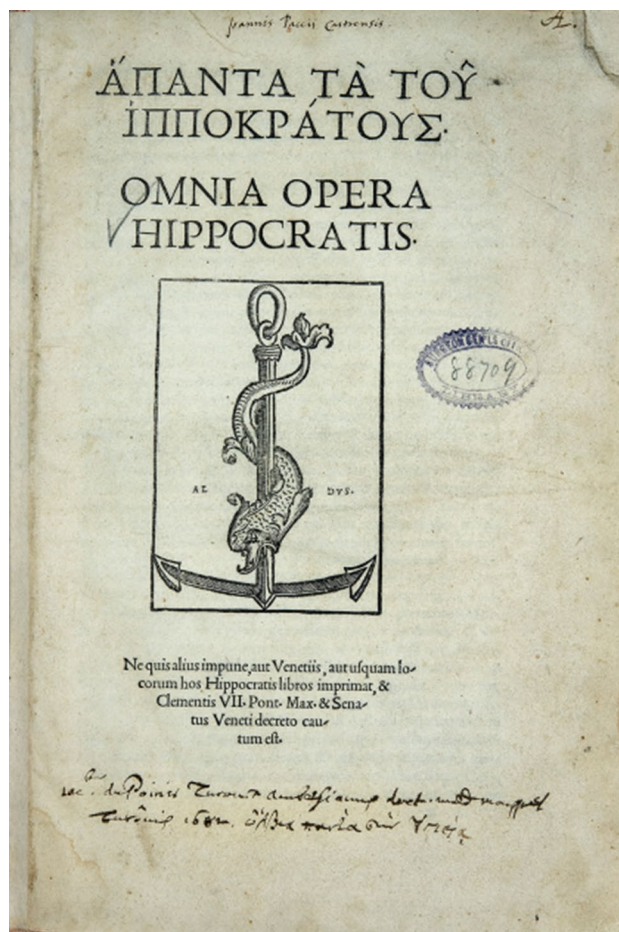
Extended author information available on the last page of the article

The *Oath* was first mentioned in the first century CE by Scribonius Largus, a Roman physician [2]. Concurrently Erotian, the Hippocratic lexicographer, also mentioned an oath among the genuine works of Hippocrates [3, pp. 39–40]. The next references to the *Oath* appeared in the late fourth century CE by two Christian authors; Saint-Jerome, who declared that Hippocrates compelled his students to swear an oath before beginning practice; Saint Gregory of Nazianzus, who claimed that his brother, Caesarius, as a medical student in Alexandria was so moral and so correct as a Christian that he had no “need of Hippocrates to administer to him the oath” [4]. In the late Middle Ages and Early Renaissance, the humanistic movement reclaimed medical and scientific knowledge by seeking out ancient Greek and Latin texts and copying them for broader distribution. The *Oath* was then revealed to the public with the advent of the printed script.

One of the first most important editions of the *Hippocratic Corpus*, including the *Oath*, was printed in Latin in 1525, in Rome by Marcus Fabius Calvus. The first Greek edition of Hippocrates’ complete works (Fig. 1) was published one year later in 1526 at the Aldine Press in Venice [1, 5, pp. lxviii]. By presenting the original text, the Aldine Greek edition provided the foundation for all further philological and medical study of the *Corpus* and the *Oath*.

The attempt to select among the various English translations of the *Oath* proved to be not an easy task, as the interpretations vary widely from one translation to another [6, 7]. However, three English translations do stand out on the basis of the authority of their translators: William Henry Samuel Jones, Ludwig Edelstein and Heinrich von Staden [7, 8, pp. 298–301, 9]. All three are translations of the so-called “pagan” *Oath*, a reproduction from the *textus receptus* (Latin for “received text”) of medieval times, based on the Greek original manuscripts of *Marcianus Venetus* 269 (M) and *Vaticanus Graecus* 276 (V) of the eleventh and twelfth centuries [1, 3, pp. 4–6, 10]. For the purpose of this paper, we chose to follow the von Staden version.

The *Oath* (“*Orkos*” in Greek) is a short, comprehensive text of 250 words (Fig. 2), with an implicit structure. It is divided by scholars into sections and paragraphs so that specific arguments could be elaborated: (a) the *preamble* and the invocation to the gods of healing; (b) the *covenant* of the oath-taker’s duties to the medical community and society regarding the transmission and dissemination of medical knowledge; (c) the *ethical code* on the wider moral injunctions of the oath-taker to benefit the ill and to refrain from dangerous, deadly or immoral activities; (d) the *peroration* on the rewards for adhering to the *Oath* or the sanctions for violating the *Oath* [11, p. 70].



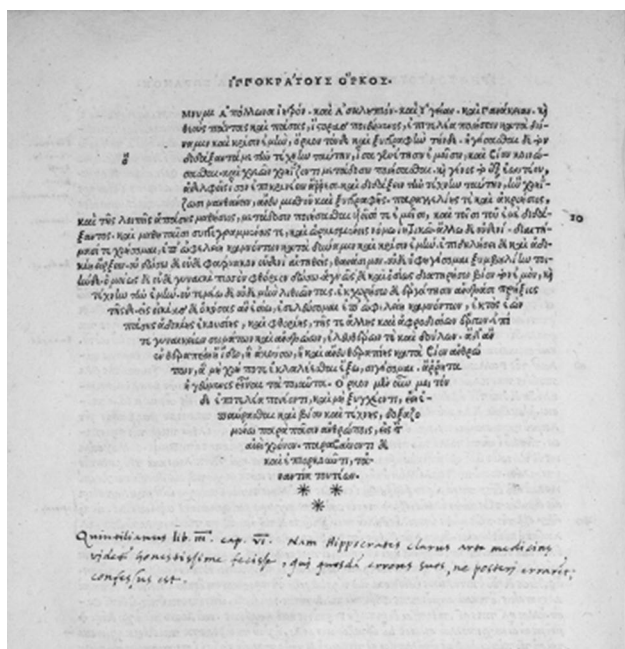
**Fig. 1** The *editio princeps* of the *Hippocratic Corpus*, comprising 59 works [in Greek APANTA TOY IPPOKRATOYS], published in May 1526 by the Aldine Press in Venice. [History of Medicine Division of the National Library of Medicine, USA.]

### The Oath’s preamble: a solemn invocation to the gods of healing

*I swear by Apollo the Physician and by Asclepius and by Health [‘Hygeia’] and Panacea and by all the gods as well as goddesses, making them judges (witnesses), to bring the following oath and written covenant [‘sygrafi’] to fulfillment, in accordance with my power and my judgment; [7.1]*

This opening of the *Oath* is not a prayer, but an invocation between the oath-taker and an ever-present medical community and society. This is a legitimization of the *Oath*, a solemn covenant with the gods and goddesses, who belong to the doctor’s lineage, to serve as witnesses to the truth of what he is about to declare. The opening echoes the origins, purposes and limits of medicine and also its transition from divine to scientific healing. “*Apollo*” is the god of healing. His son “*Asklepios*” is the god of medicine. *Asklepios*’





**Fig. 2** The first Greek edition of the Hippocratic Oath published in 1526 by the Aldine Press. [History of Medicine Division of the National Library of Medicine, USA.]

daughters are “Hygeia” (Fig. 3), the goddess of health or preventive health care, and “Panacea”, the goddess of a universal or unique remedy. WHS Jones has translated “Hygeia” and “Panacea” as “Health” and “All-heal”, personifications of health and healing. This invocation brings a solemnity to the Oath, which thus becomes a pledge instead of a simple promise. Among all the sections of the Oath, the opening has seen the greatest adjustments over the centuries in various cultures and changing beliefs. Some scholars have commented on the unsuitability of swearing to deities that are no longer relevant to today’s world.

**The duties to the medical community: transmission of medical knowledge**

*To regard him who has taught me this téchnē [‘art’] as equal to my parents, and to share, in partnership, my livelihood with him and to give him a share when he is in need of necessities, and to judge the offspring (coming) from him equal to (my) male siblings, and to teach them this téchnē, should they desire to learn (it), without fee and written covenant [‘sygrafi’], and to give a share both of rules and of lectures, and of all the rest of learning, to my sons and to the (sons) of him who has taught me and to the pupils who have both make a written contract and sworn by a medical convention but by no other. [7.2]*



**Fig. 3** Funerary relief showing the god Asklepios with his daughter Hygeia, the goddess of Health, feeding the sacred snake, the symbol of prudence. Last quarter of fifth century BCE, Istanbul Archaeological Museum, Turkey

The second section of the Oath starts with the moral commitment and the duty of the oath-taker to honour his own teacher as his own parents, to make him the partner in his livelihood and to relieve his financial distress in case of necessity. Within a single sentence, three generations of professional physicians appear, all in a close relationship to transmit medical knowledge. The closeness of the teacher–student relationship and the deep understanding of the pupil’s personality, built during a long apprenticeship characterized by a separate moral element, discouraged the entry of unworthy persons into the profession [12, pp. 1419–1422].

The word “art” [‘téchnē’ in Greek], meaning skill or craft, in the Hippocratic Corpus highlights the professional domain of medicine [7]. Since the “art” of medicine is learned, practised and transmitted, the new physician vows to impart “rules and lectures, and all the rest of learning” to colleagues and students of medicine, as well as to those who pursue a medical career by taking the Oath. In addition, the new physician vows “to share, in partnership”, which signifies the collective nature of the practice of medicine between doctors and students. The commitments of loyalty to colleagues, to the profession

and to “teachers” continue to be important values for the medical communities today.

The *Oath* refers to free medical education “*without fee and written covenant*” for the oath-taker’s sons as well as for his teacher’s sons. From Plato, we learn that Hippocrates trained physicians for a fee [13]. The Hippocratic author of *Precepts* advised the students to put financial considerations second to patient’s care: “*So one must not be anxious about fixing a fee. For I consider such a worry to be harmful to a troubled patient, particularly if the disease be acute*” [14, para IV]. This section of the *Oath* disappears entirely in the Christian version: “*I will teach this art [...] without grudging and without an indenture*” [3, p. 23].

### The ethical code for physicians

The third section is considered the core of the *Oath* and the very essence of the ethics of medicine. It advocates the perennial ethical principles of beneficence, non-maleficence, respect for life, professional integrity, restriction in the field of expertise, prohibition of sexual abuse, and patient confidentiality. These principles demonstrate the humanistic and moral values reached by medicine in that historical era.

#### The injunction “For the Benefit of the Ill”: the principle of beneficence

*And I will use regimens for the benefit of the ill in accordance with my ability and my judgment* [7.3i].

The injunction “*for the benefit of the ill*” is a recurrent theme that underlies the *Oath*. It is the so-called Hippocratic Principle, the most emphatic principle in Hippocratic medicine and the originality of the Hippocratic thought [15, pp. 112–126]. This simple axiom is a sober command for a good physician to aim for the obvious objective of his art, the absolute respect for life by committing to provide care and to help the sick. In ethical terms, this is the principle of “beneficence” of medical ethics. In recent years, the beneficence model lost its supremacy over the autonomy model that emphasizes the decision-making rights of patients, such as the right to truthfulness, confidentiality, privacy, disclosure, and consent [16, 17].

Edmund Pellegrino and David Thomasma proposed a third model that reconstructs the traditional beneficence model, by accommodating some of the concerns of the autonomy model. Their model of “beneficence-in-trust” is based on beneficence and on acting in the best interests of the patients, two notions “intimately linked with their preferences” [18, pp. 11–36]. The authors reaffirm that the value of patient autonomy is inherent in the principle of beneficence. Beneficence does not necessarily override the respect for

autonomy [18, pp. 25–46] nor does autonomy override all other principles. Modern medicine incorporates moments of patient choice as well as moments of necessary, beneficial paternalism [19]. Beneficence in modern medicine is a two-way principle in which patients, as well as physicians, make decisions.

This same principle appears again in the Declaration of Geneva, drawn up in the aftermath of the Nuremberg Nazi “Doctors’ Trial”, in which the physician swears “the health and well-being of my patient will be my first consideration” [1, 20]. The European Court of Human Rights also refers to the *Oath*, when it mentions that: “it should be the duty of all doctors to exercise their profession according to the Hippocratic Oath and of all medical departments to cooperate to protect life” [21].

#### The injunction of “No Harm”: the principle of non-maleficence

As the injunction “*to benefit the ill*” represents an ideal that the physician cannot always attain, the oath-taker adds:

*... but from (what is) to their harm or injustice [‘adikia’] I will keep (them)* [7.3ii].

The imperative of “*no harm*” is not the first time that appears in the Hippocratic writings. It is found much earlier than the *Oath* in the clinical, epidemiological treatise *Epidemics I*: “*as to diseases, make a habit of two things, to help, or at least to do no harm*” [22, pp. 165–166]. The physician’s duty goes beyond the prevention of harm and includes restoration or improvement of biological function.

The principle of “*no harm*” is not isolated from the principle “*the benefit of the ill*”. It is often identified as a primary principle of medical ethics and as the biomedical principle of “non-maleficence” proposed by Beauchamp and Childress, an obligation not to inflict harm on others [23, p. 113, 24]. To understand this principle it must be clear what the words “*harm or injustice*” really mean. The word “harm” in medicine has two possible meanings. It may either mean an adverse effect on the patient or else abuse or injustice. The first one refers to the harmful side effects caused inadvertently from the right treatment of a specific disease. The second one refers to the harmful effects of applying the wrong treatment because of a doctor’s negligence. Therein lies the answer to the medical malpractice crisis of contemporary medicine, “where questions of morality become issues of legality” [24].

Professor of Ethics Albert Jonsen remarks that this axiom declares the morality of medical practice and serves as a reminder to physicians that they “should assess the possibilities of harm that attend any attempt to heal” [25, pp. 1–12]. If doctors are unable to help, they should take care not to harm [26]. In contemporary medicine particularly, with its

complex and demanding procedures, the physician should carefully balance and assess the best chance for success with the lowest risk of harm of each therapeutic intervention. However, the obvious question is, whether ineffective treatments—such as “overtreatment, superfluous tests, and unneeded procedures, are morally permissible and justified” [26]; that is, whether they are ethically acceptable as long as no harm incurs to the patient. This practice has become controversial in modern medicine, when technological advances can sustain life even when life is losing its vitality [27].

### Prohibition of euthanasia or absolute respect for life?

*And I will not give a drug that is deadly* [‘pharmakon thanassimon’] *to anyone if asked (for it), nor will I suggest the way to such a counsel* [7.4i,ii].

Some medical ethicists have understood this passage as the prohibition of euthanasia or physician-assisted suicide or even discontinuation of life-sustaining treatment. The concept of prohibition of euthanasia was mainly based on the Pythagorean hypothesis [28]. However, nowhere in the Hippocratic treatises evidence can be found of physicians assisting the sick to commit suicide or practice euthanasia.

The Greek word “*euthanasia*”, meaning a “good, happy death” from the words “*eu*” (good) and “*thanatos*” (death), appeared about a century after the *Oath* was written. The word euthanasia was used for the first time by the Greek comic poet Poseidippus, who lived around 300 BCE. In an extract of his lost comedy “*Myrmex*” (The Ant), euthanasia is mentioned as a blessing from the gods. “*Of all the wishes that a man prays for to the gods, nothing is better than a happy death* [‘euthanasia’]”<sup>1</sup> [29, p. 68, 30, 31]. In the second century BCE, a euthanasia “custom” by suicide was practised in the Aegean island of Kea, where inhabitants lived long in a healthy climate. People did perceive the frailty of old age as humiliating and therefore did not “... wait until they are very old for death to take them, but before they grow weak or disabled in any way, take themselves out of life, some by means of poppy, others with hemlock” [31, 32]. Hence, the word euthanasia originally had the meaning of natural death without agony and not of medically assisted death, a notion attributed much later to the sixteenth century English philosopher Francis Bacon [31, 33, 34].

Prohibition of euthanasia, physician-assisted suicide or discontinuation of life-sustaining treatment reflects current and not ancient Greek concepts [29, pp. 66–80]. Facilitating suicide is an action that the *Oath* rules out altogether, as

an action incompatible with the aims of medicine, the “art” of restoring health. It seems to be a warning to the physician that his responsibility is to preserve and sustain life and under no circumstances to be associated with induced death.

Several scholars, like Littré, Carrick, Miles and Jonsen, are of the opinion that the words “*I will not give a drug that is deadly*” express a disavowal of the collaboration of physicians in homicide by poisoning, not an unreasonable explanation for ancient Greece [11, pp. 94–99, 25, pp. IX–XI, 29, pp. 66–80]. The practice of assassination by poisoning of kings, successors and competitors was quite common following the turmoil after the defeat of Athens by Sparta. It was believed that a physician, positioned near a leader, was well suited to assist in killing, in view of his extensive knowledge of the special effects of drugs [11, pp. 94–99]. Suspicions that physicians might have been involved in poisonings were often voiced in ancient Greece. It is worth noting that Plato in his *Laws* expresses contempt to the physician-assassin, who damages the trustworthiness of the whole profession and thus endangers the relationship of trust with his patient [35].

Today, and in response to Nazi crimes, the Declaration of Geneva, includes “I will maintain the utmost respect for human life; [...] I will not use my medical knowledge to violate human rights and civil liberties, even under threat” [20].

### Prohibition of abortion or warning against harming the patient?

The next injunction is no less controversial than the previous one.

*And likewise I will not give a woman a destructive pessary* [‘pesson fthorion’] [7.4iii].

The word “*likewise*” connects a “*deadly drug*” with a “*destructive pessary*”, both of which contradict the most fundamental aim of medicine. In ancient Greek, the keywords in this passage are “*pesson fthorion*” translated by Littré as “*pessaire abortif*” and by Edelstein as “*abortive remedy*” [9, pp. 3–6]. “*Pesson fthorion*” was not just an ordinary pessary or just any remedy for that cause. It was a herbal preparation fashioned into a vaginal pessary dipped in a variety of substances, one of many ways to induce an abortion. The use of an unsterile or unclean foreign body in the vagina combined with uterine instrumentation seems to have been considered the most dangerous abortive method for the pregnant woman. Such methods could cause serious complications like infections and, at worst, the unintended death of the pregnant woman or the destruction of the live foetus [7, 29, pp. 81–90].

Although this injunction is widely misinterpreted as a prohibition of abortions, it is clearly not against all abortive methods, but only against the use of a destructive vaginal

<sup>1</sup> Translation by the authors of the Greek text: “ὡν τοῖς θεοῖς ἀνθρώπος εὐχεται ταχεῖν τῆς εὐθανασίας κρείττον οὐδὲν εὐχεται”.



drug-soaked suppository [36, pp. 134–146, 37]. The Hippocratic treatises of 400 BCE used a range of abortive methods, called “*expulsive*” [“*ekvolia*” in Greek] [36, p. 135, 38]. This passage most probably relates specifically to the physical health of the pregnant woman and simply meant a clinical warning to the physician against harming the pregnant patient by using a destructive pessary, rather than a moral objection to abortion itself.

In classical Greece, abortion was not illegal or morally wrong on the basis of human or foetal rights, or homicide. In contrast to the Pythagoreans, who unconditionally condemned abortion, both Plato and Aristotle were advocates of abortion and infanticide under certain circumstances [11, pp. 115–138, 39]. The Roman law prohibited only the administration of abortive drugs from the mid-third century CE [4]. The anti-abortion interpretation of the *Oath* projects later Christian values and beliefs into ancient Greece of 400 BCE. With the prevalence of Christianity, abortion was characterized as a criminal homicide and was strongly condemned since 314 CE [36, p. 141]. The Christian version of the *Oath* forbids not only the abortive pessary, but abortion by any means [36, pp. 134–155], a modification necessary “so that a Christian may swear the *Oath*”.

This passage of the *Oath* is at the core of the landmark abortion rights case, “*Roe v. Wade*” of the USA Supreme Court, which “overturned state anti-abortion laws and established the right for women to choose abortion in the first trimester in consultation with their physicians” [40]. Justice Blackmun, the author of the majority opinion for the case, pondered the relevance and the extent of acceptance of the Hippocratic *Oath* during the summer of 1972, having researched historical attitudes on abortion at the Mayo Clinic medical library [41, 42]. By invoking the medical profession and its high ethical standards, Blackmun succeeded in securing a woman’s right to abortion [42]. In the twentieth century, the justification of abortion by appeal to free choice or autonomy has separated such a choice from what is beneficial to life and health for mother and child. In fact, most of the oaths administered by USA medical graduates omit the relevant section and only 8% of them prohibit abortion [43].

### Personal purity and professional integrity

The next sentence is inserted, seemingly unrelated, between the previous and the following obligations of the physician.

*And in a pure and holy way I will guard my life and my téchnē* [7.5i].

This phrase summarizes the central objective of the *Oath*, wherein an explicit promise is given “*in a pure and holy way*”. The two concepts “*purity*” and “*holiness*” were significant in most influential Greek healing cults. Their insertion in the very centre of the moral commitments

of a physician emphasizes their importance. They give a moral dimension to the life and the “*art*” of the physician. Extant sacred inscriptions regulating purity were found at the entrances of religious sanctuaries and temples, as in the temple of Asklepios at the influential sanctuary of Epidaurus that reads “*Pure must be the person who goes inside the fragrant temple, and purity is to think holy thoughts*” [44]. Both texts, from the *Oath* and the inscription of Epidaurus, have strong religious qualities and belong to a healing tradition, making use of “*purity*” and “*holiness*” in similar ways. The word “*purity*” in the *Oath* should not be understood only in terms of traditional forms of ritual purity, but also in moral terms. The oath-taker is committed under oath to a profoundly moral pledge, which covers not only his professional conduct, his “*art*”, but also his “*life*” as a whole, and hence his private, personal conduct [7].

At the time the *Oath* was written, state regulations about medicine did not exist and physicians were not the trusted professionals of nowadays. Such was the potential for abuse that the *Oath* stressed the need for moral and professional integrity in “*purity*” and “*holiness*”. The European Court of Human Rights remembering this passage of the Hippocratic *Oath* in the “*Case of König v. Germany*” concludes that in the “*exercise of the medical profession, the spiritual element takes precedence over the material element*” [45].

### Prohibition of surgery or limitations to physicians’ competence?

*I will not cut, and certainly not those suffering from stone, but I will cede (this) to men (who are) practitioners of this activity* [7.6i].

The pledge never to use the knife is the third highly controversial vow of the *Oath*. Edelstein believes that “only in connection with Pythagorean medicine this injunction acquires any meaning and plausibility at all” [9, pp. 26–32]. He claims that in order to maintain divine purity Pythagorean medicine forbade “*bloody operations*” [6, 9, pp. 26–33]. Miles reasonably doubts the Pythagorean influence on the *Oath*, on the basis that disavowal of surgery was not representative of Greek medicine in 400 BCE when surgery was accepted as part of a physician’s work [29, pp. 105–123]. Many Hippocratic treatises describe numerous surgical procedures like the drainage of abscesses, the surgical remedy of anal fistulae and haemorrhoids, phlebotomy, surgical repair of fractures and cauterization of wounds; also these treatises describe surgical instruments and their shapes and functions [46]. Unmistakably, the Hippocratic *Aphorism* 7.87 states “*those diseases that medicines do not cure are cured by the knife*” [47].

So, the *Oath* does not forbid surgery in general, but only surgical operations for “*those suffering from (bladder)*

stones”, a condition common to those times. Such surgery was considered technically difficult and risky as it could cause irreparable damage and even death to the patient. The surgical details of lithotomy and its serious complications were not known by the Hippocratic doctors nor mentioned in the Hippocratic treatises but were described by Celsus much later in 20 CE [29, pp. 105–123, 48]. Therefore, it is not possible for the *Oath* to prohibit an operation that was not known in its time, a fact ascertained by both Celsus and Galen, who do not mention such a prohibition included in the *Oath*. Actually, the passage of the *Oath* against lithotomy was recorded for the first time in the Oxyrhynchus papyrus, in the third century CE [36, pp. 163–185]. WHS Jones and others believe that the prohibition “*I will not cut*” is a later interpolation during the Roman or early Christian era, after the invention of bladder lithotomy. Hence the injunction “*certainly not those suffering from stone*” is clearly alluding to specialized “lithotomists” [10, 36, pp. 163–187, 49].

Professor Leon Kass, chairman of President Bush’s Committee on Bioethics, suggests that this vow refers to prohibition of surgery as a medical act that is beyond a physician’s competence [50]. The *Oath* implicitly urges physicians to acknowledge their limitations and to refer difficult operations, such as lithotomy for bladder stones, to the specialized practitioners to prevent medical errors [50]. Much more than just being controversial, the Hippocratic *Oath* actually defined and legitimized for the first time the specialization in surgery and internal medicine. This command is as important and relevant nowadays, when patients are worried about medical errors and complications, as it was in Hippocrates’ time. Unmistakably, Hippocrates in the treatise *Ancient Medicine* praises the doctor who makes the least mistakes: “*and that physician who makes only small mistakes would win my hearty praise*” [51].

### Prohibition of sexual abuse and respect of patient’s dignity

*Into as many houses as I may enter, I will go for the benefit of the ill, while being far from all voluntary and destructive injustice [‘adikia’], especially from sexual acts both upon women’s bodies and upon men’s, both of the free and of the slaves [7.7i,ii].*

For the second time, the physician vows “*to benefit the ill*” and in different words, repeats the early injunction against intentional injustice and harm in relation to the private and personal sphere of the patient and his family. The *Oath* distinguishes between the ethics of the public medical life and the ethics of the physician in the patient’s private sphere, both ruled by concepts of beneficence and social justice.

This passage of the *Oath* explicitly prohibits sexual abuse and imposes respect for the dignity of the patient and his family. Violation of these rules dishonoured both the physician–guest as well as the members of the household. The prohibition of the doctor–patient sexual relationship is maintained in almost half of 50 ancient, medieval and contemporary oaths. Even though the prohibition of sexual contact with patients, as a form of abuse and injustice, seemed to be a generalized practice to the medical profession for centuries, is a relatively recent achievement of modern legislation on sexual harassment. Furthermore, professional medical societies have put boundaries to the sexual exploitation of patients by their doctor as such contact may impair the doctor’s judgement and may compromise the patient’s medical care; at the same time victims may mistrust physicians, as well as suffer from post-traumatic stress, depressive disorders, suicidal tendencies, relationship problems or substance abuse [52, 53].

The *Oath* implicitly excludes all forms of discrimination and sets criteria for the equal treatment of all social categories “*women and men, free and slaves*” [29 pp. 139–148]. Hippocratic physicians regarded their patients as human beings irrespective of social status, sex or racial origin, free persons or slaves, men or women, wealthy or poor, citizens or strangers [15, pp. 112–126]. The author of the treatise *Precepts* advises the physician to display generosity in treating strangers and the poor, and if needed, to give his services for free. “*Sometimes give your services for nothing [...]. For where there is love of man, there is also love of the art*” [14, para VI]. This is one of the foundations of Hippocratic medicine; by loving humanity, the physician shows that he loves his “art” as well.

### Revealing information about the patient: respect of patient’s confidentiality

*And about whatever I may see or hear in treatment, or even without treatment, in the life of human beings—things that should not ever be blurted out outside—I will remain silent, holding such things to be unutterable [‘arreta’] (sacred, not to be divulged) [7.8i, ii].*

The *Oath* compels confidentiality in what is seen or heard as a fundamental principle in the relationship of the physician with his patients. The respect for confidentiality (a component of the modern principle of autonomy) of the information the patient discloses in the course of treatment and outside treatment is an absolute principle. It is noteworthy that in ancient Greece confidentiality had a different meaning from the modern one. Ancient physicians took the medical history, examined patients and practised surgery in public places or houses where family members and bystanders were present [15, pp. 75–86, 29, pp. 149–155,]. Indeed,

the names and medical details of patients were inscribed at the entrances of sanctuaries as evidence of successful treatment, as shown in the famous epigrams at Epidaurus [44].

Nowadays, the confidentiality of the medical information has become an issue as it is increasingly difficult to maintain and can be breached in many ways. In this era of computerized record keeping, medical databases are accessible to non-medical authorities and various other sectors of the industry requiring health records for qualification. Furthermore, the duty of confidentiality may not be absolute. For example, there are uncertainties as to whether the death of a patient excuses the medical practitioner from the duty of confidentiality, as was the case with the revelation of President Mitterrand's cancer during presidency and the corresponding Paris Court of Appeal and European Court of Human Rights rulings [54].

### The physician's accountability: rewards or sanctions?

The *Oath* ends with the *peroration* on the rewards or sanctions of the physician:

*If I render this oath fulfilled, and if I do not blur and confound it (making it to no effect) may it be (granted) to me to enjoy the benefits both of life and of τέχνη, being held in good repute ['doxazomenos'] among all human beings for time eternal. If, however, I transgress and perjure myself, the opposite of these [7.9].*

The concluding words “*being held in good repute*” are unambiguous. If the oath-taker fulfils his *Oath*, the reward is “*doxa*” (good repute), which in Greek signifies honour, fame, one's professional reputation or moral virtue. The community's approval becomes a stimulus for good deeds. It is the greatest reward for both the physician himself and his “*τέχνη*”. Furthermore, the words “*for time eternal*” extend to future generations and emphasise the social role of the physician.

Conversely, if the physician fails to fulfil his obligations, if he violates the *Oath*, and commits perjury, he is warned that “*the opposite of these*” await him: unhappiness, dishonour and a bad reputation or at least a lack of good reputation [7]. Such a bad reputation can be granted only by the gods, who will inflict it only upon the non-fulfilment of the *Oath*.

In ancient Greece, there were no legal penalties for keeping erring physicians in order. The medical profession was of a freestanding character [55]. The Hippocratic *Law* finds fault with this lack of state control upon medicine, which was “*the only art which our states have made subject to no penalty, saved that of dishonour*” [56]. It is in this social environment and mentality that the Hippocratic *Oath* created a professional identity.

## Conclusions

The tradition of self-regulation of the medical profession regarding medical ethical standards reaches far back to the Hippocratic *Oath*. This is a tradition that sustains institutions and Supreme Courts when they draw upon the commitments of medical as well as dental professionals [57]. The *Oath* in its unyielding and absolute regard for life became a fundamental part of western law on medical ethics and patients' rights with State Courts and Supreme Courts often referring to the *Oath* in order to impose civil and penal sanctions. It was Justice Harry A. Blackmun of the USA Supreme Court who acclaimed the Hippocratic *Oath* as “the ethical guide of the medical profession” and “the apex of the development of strict ethical concepts in medicine” [40, pp. 130–131]. The numerous citations to the *Oath* in judicial rulings exemplify its important status and attest to its continuing significance [42]. The most renowned such judgement, the *Nuremberg Code*, established the ethical principles that safeguard the rights of patients in medical research [1].

In an era of huge societal changes, medical advances and diverse bioethical challenges the Hippocratic *Oath* continues to affirm the moral nature of the field of medicine as a whole. Even though the ethics of the *Oath* was inspired by the moral culture of its time, the *Oath* as a whole is still pertinent to medical professionals conveying the duties and commitments of a physician. The fundamental principles of beneficence, non-maleficence and confidentiality in the physician–patient relationship, which were established about two millennia before Beauchamp and Childress introduced them, are principles still applicable to the ethical practice of modern medicine.

In brief, the Hippocratic *Oath* encompasses lifelong commitments to the medical community by:

- promoting the transmission and dissemination of medical knowledge,
- binding the objectives of medical education to the interests of the patients,
- regulating treatment decisions and practices regarding medications, interventions, surgery,
- advising the physician to refrain from all intentional wrongdoing and harm,
- restricting the physician to his field of expertise,
- forbidding medicine to serve other interests, expediences and political objectives,
- stressing the need for moral and professional integrity,
- demanding from the physician to respect the dignity of the patient and his family,
- forbidding sexual abuse of his patients,
- compelling confidentiality of the physician about his patient,



- asking for accountability to the medical community and society,
- introducing a moral system of rewards and sanctions in medical practice.

Taking into consideration that all the above were originally formulated in 400 BCE, the spirit of the *Oath* is clearly as relevant today as ever in our age of biomedical sciences with far-reaching moral implications. In addition, the interpretation of the *Oath* can be extended to medical practices, such as medical research, unknown at the time of Hippocrates when medical knowledge was based on observation and logical reasoning. Furthermore, the importance of safeguarding patient's body and mind as well as the respect for his dignity, referred in the *Oath*, should be the guiding lines of the regulatory and ethical objectives in human experimentation. The relevance of the *Oath* today is a breakthrough in that it determines the moral, social and ethical sanctions in case of violations.

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### Compliance with ethical standards

**Conflict of interest** All authors declare that they have no conflict of interest.

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