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Advantages and Necessity of Solid Bioethics Training in Medical Education General Reflections and Focus on the Specific Situation in Italy

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ABSTRACT

Modern Medicine faces many complex ethical challenges today. Scientific progress, emerging technologies, evolution of the concept of health, Patient autonomy, and the overcoming of medical paternalism are some possibile examples. Consequently, it seems increasingly important that every physician (and healthcare professional) acquire, during their university training, sufficient knowledge of Bioethics to apply in their future daily clinical practice. Furthermore, it seems essential to define the specific training required for bioethicists, in order to avoid the risk of shortcomings or errors when handling complex cases due to a lack of expertise, knowledge or methodology. This definition is very complex and challenging, as Bioethics is a multidisciplinary field that extends far beyond the medical sphere.

Keywords

Bioethics, Bioethicist, Medicine, Education, Principilism, Personalism.

Introduction

Bioethics emerged as an independent discipline in the 1960s and has since become a central component of medical education. The ethical dilemmas it addresses are primarily linked to the continuous advances in Medicine. Some data show that bioethics education correlates with improvements in physicians' knowledge, attitudes, and practice, and over 97% of U.S. hospitals nowadays offer healthcare ethics services [1].

Medical students appear to recognize the importance of bioethical knowledge for their future professional practice. For example, a survey of 640 medical students showed that a significant percentage of them understand the importance of ethics education, believing it can enhance the ethical competence required to healthcare professionals; in particular, this study examined the necessity of learning the Universal Declaration on Bioethics and Human Rights [2]. Similarly, nursing students with training in Bioethics also demonstrate a solid understanding of bioethical principles, recognizing the relevance of ethics in daily clinical practice [3].

We should also remember that, as technical and scientific expertise evolves, new ethical studies and frameworks become necessary. For example, with the rapid integration of artificial intelligence (AI) into the healthcare sector, bioethics education should ensure that technological progress strengthens rather than weakens the humanistic foundations of Medicine [4]. Consequently, healthcare professionals should develop the necessary skills to understand the ethical implications of all emerging technologies, while preserving Patient autonomy, along with the principles of beneficence, non-maleficence, and justice.

Ethical reflection in Medicine and life sciences has taken on an increasingly central role in recent decades. Development of biomedical technologies, globalization of healthcare systems, and the resulting growing complexity of clinical decisions have made it necessary to establish a theoretical framework to guide moral choices in healthcare. Bioethics analyzes values, principles, and responsibilities involved in healthcare and scientific research.

Discussion

The teaching of Bioethics is recognized by scientific Literature as an essential component of medical training. It allows for the development of moral reasoning, decision-making skills, and clinical professionalism. Furthermore, bioethical education should not be limited to the theoretical transmission of principles and concepts, but should be integrated into the medical curriculum and accompany clinical practice on a daily basis [5,6].

Some data suggest that teaching methods based on case studies, simulations, guided reflection, and structured discussion are particularly effective in promoting solid and lasting ethical skills in healthcare professionals [7]. Among the possible teaching models, problem-based learning (PBL) promotes students' ability to address complex ethical dilemmas through exposure to realistic clinical cases, improving both engagement and the practical applicability of ethical knowledge [8]. Similarly, Team-Based Learning (TBL) is useful in promoting critical thinking and interdisciplinary dialogue, encouraging collaborative learning and understanding of professional responsibilities [9]. Finally, teaching methods based on case studies, simulations, guided reflection, and structured discussion are particularly effective in developing valid ethical skills in healthcare professionals [7].

It seems also essential to update the content of Bioethics teaching in line with emerging issues [10], i.e., AI and digital technologies, assisted reproduction and eugenics, euthanasia and end-of-life care, etc. Almost every doctor today faces bioethical dilemmas, but addressing them without specific training risks bringing personal ideas or ideologies into play (consciously or unconsciously), even to the point of radicalism: such a risk seems not acceptable today, in a post-modern, deeply secularized, multiethnic, and multicultural global context. This sensitivity appears to be imperative both in clinical practice and in experimental research.

So-called “emerging technologies” are increasingly becoming part of contemporary cultures. They have become more or less heavily involved in various sectors: medical, educational, engineering, economical, political, legal, military, and others. These technologies are particularly widespread in Western societies, but also in emerging Countries they are gradually developing and becoming more widespread. Nowadays, contexts without their presence are almost disappearing. Some examples of emerging technologies are the following: generative AI, advanced biotechnology (e.g., CRISPR and genetic engineering), quantum computing, robotics, automation, Brain-Computer Interfaces (BCI), climate tech, smart mobility, zero trust architectures and blockchains, Mixed Reality (XR) and Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR), and others. So, in parallel with technological progress, there is a growing need for bioethical reflection on these new technologies. This should address both the impact of emerging technologies on humans and the mind (which is one of the subjects of so called Neurobioethics) and their effect on the concept of personal identity. In fact, with the increasingly complex daily intertwining of people and technology, theories are emerging that human identity is no longer just physical-biological but fluid and potentially hybrid.

Then, the development of structured bioethical skills makes it possible to go beyond a purely pragmatic, deontological approach aimed only at resolving concrete bioethical dilemmas, in favor of a formative, value-based approach that nurtures attitudes, moral dispositions, and professional identity of future medical doctors (MDs) in a more comprehensive way [11].

In the specific Italian context, Bioethics is included in different ways in medical curricula, but there seems to be too much heterogeneity in terms of content, methods, and timing. Students seem to prefer interactive and clinically oriented approaches, but there is a clear need for a more structured and systematic integration of Bioethics into Italian medical training [12]. Postgraduate courses in Bioethics are available at various Italian universities, but at the same time expertise can be sometimes based more on personal studies than on actual skills and recognized academic qualifications.

In practice, at least two key issues can be identified in the current situation in Italy: (I) the need to standardize the core Bioethics curriculum in medical schools (and other health professions), (II) the need to standardize the formal academic training required to work as a bioethicist.

If a professional who has not received academic training in Bioethics is tasked with addressing this issue, there can be a risk of methodological inadequacy. For instance, there could be a risk of advocating personal ideas or subjective positions rather than analyzing all the implications of an ethical dilemma in a proper, well balanced and thorough manner, due to methodological shortcomings.

Instead, Bioethics is a cornerstone of contemporary medical practice. It analyzes and guides moral decisions that arise in healthcare, where doctors, Patients, families and caregivers, and institutions are confronted daily with complex situations involving life, health, suffering, and human dignity.

One of the most influential models in Bioethics is based on the so-called prima facie principles, developed mainly in Anglo-Saxon and North American ethical theory, applied to Medicine to provide a practical framework for healthcare professionals. Such principles are fundamental references, defined primarily by Beauchamp and Childress in their book Principles of Biomedical Ethics (1979). They are not absolute, but are considered binding in the first instance: if they conflict, they need to be balanced to determine which one prevails in the specific case.

The principle of autonomy recognizes Patients' right to make informed decisions about their health and related medical treatments. Consequently, physicians have to provide clear, complete, and understandable information about diagnoses, treatment options, and the benefits and risks of different procedures, in order to sustain Patients' self-determination. One of

the fundamental tools supporting autonomy is informed consent, which is not only a legal obligation but also an ethical duty that strengthens the relationship of trust between doctor and Patient. In practice, doctors should not impose paternalistic decisions [13], but should help Patients fully understand all the different options available to them. Consequently, a Patient may refuse treatment even if the doctor believes it to be the best solution. The principle of beneficence requires healthcare professionals to act in the Patient's best interests, promoting their well-being and seeking to improve their health. The principle of non-maleficence is often summarized in the famous expression primum non nocere, meaning "first, do no harm". It requires doctors not to cause unnecessary, intentional, or disproportionate harm to Patients. This principle seems particularly relevant in modern Medicine, characterized by advanced technologies and increasingly complex treatments. The principle of justice concerns the equitable distribution of healthcare resources and access to medical services. If resources are limited, priority criteria should be considered, avoiding every discrimination. This principle is particularly important in healthcare policy and hospital management. Doctors and administrators should also strike a balance between the needs of individual Patients and the sustainability of the healthcare system as a whole.

Prima facie principles are not absolute, so they may conflict with each other: in these situations, bioethical evaluation should consider clinical information, Patient's values and choices, professional standards, and applicable laws. For particularly complex cases, it is often helpful to involve multidisciplinary teams, ethics committees, or legal advisors. The balance achieved determines the superior bioethical choice, and this process is called balancing or specification of prima facie principles.

We should also remember that the concept of health has undergone significant evolution over time [14]. In classical Medicine, health was traditionally understood primarily as the absence of biological disease. This model, often referred to as biomedical, viewed the human body as a biological machine: when a part broke down, the doctor's job was to repair it. Although this view contributed enormously to the development of scientific Medicine, it was nevertheless limited. In fact, it reduced human beings to their biological dimension alone. Over time, a broader concept of health has developed, which also includes psychological, social, and cultural factors. A very influential definition was proposed by the World Health Organization (WHO) in 1948, according to which health is «a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity». This definition marked an important turning point, introducing a holistic-integral perspective on health. Furthermore, in this case, health does not coincide with the absence of disease: this means that a Person with a disease can live "healthily", and on the other side that a Person without any biological disease can be "ill."

In recent decades, the concept of health has been further expanded. Today, health is often referred to as the ability to adapt and self-manage, within a dynamic conception of human well-being. Health is no longer considered a static state, but a continuous process that involves the whole Person in all their complexity. From an ethical point of view, this change has profound implications. If health concerns the whole Person, then medical decisions should also take into account not only clinical data, but also values, relationships, freedom, autonomy, and dignity of the Patient.

Today, Patients are increasingly aware of their rights and sometimes also more likely to take legal action when they believe they have suffered harm. Medical liability depends on several factors, e.g. diagnostic errors, inappropriate treatment, failure to inform the Patient, or negligence, carelessness, or incompetence. The consequences can be significant for both individual doctors and healthcare facilities, in terms of both financial compensation and reputational damage. Adherence to the principles of Bioethics is therefore not only a moral duty but also a necessity in order to reduce the risk of legal disputes. However, one of the most significant consequences of the fear of lawsuits is the spread of so called defensive Medicine. In this case, doctors primarily want to protect themselves from possible accusations, and do not base their decisions solely on the actual benefit to the Patient. This can contribute to creating a negative climate of mistrust between doctors and Patients.

Then, a decisive factor in damaging the therapeutic relationship and resorting to defensive Medicine may also be that of a "desire-based Medicine". This situation occurs when a Patient (or even their caregivers) demand prolonged aggressive or worthless treatments or tests, in which the objective benefits are less than the current and/or subsequent or potential harm, and/or with an expected deterioration in quality of life. Consequently, in the event of unreasonable, unhelpful, unethical, or excessive requests, the physician should offer clear, comprehensive, and scientific information with empathy and respect, without being influenced by fear (or explicit threats) of legal action by Patient or caregivers. Understanding when a proposed treatment ceases to be ethical is a very crucial task of Bioethics and this can not be approached approximately or without the necessary epistemological and methodological tools, into a multidisciplinary approach.

To curb the spread of defensive Medicine, it is necessary to promote a Patient-centered Medicine, with appropriate clinical decisions, effective communication, and a strong ethical commitment. A balance should be sought between professional responsibility, respect for Patients' rights, and the sustainability of the healthcare system, with the aim of ensuring high-quality medical care that is truly oriented toward the good of each Person.

In practical terms, medical act and clinical decisions should always be directed toward the good of the Patient and his/her best interest. The respect and center of prima facie principles can orient clinical and therapeutic choices, making trained health professionals a whole moral community.

Alongside Principlism, one of the other most significant approaches in bioethical reflection is Personalism [15]. This orientation places

the human Person at the center, considered as a unique, complex, unrepeatable being endowed with ontological dignity. According to Personalism, the Person can not be reduced to a mere object of medical intervention or scientific research. In fact, the Person is always a subject who should be respected in his/her freedom, integrity, autonomy, and relational dimension.

A central principle of Personalism is precisely the centrality of the Person. Consequently, every medical decision should be oriented toward the integral good of the Person, considering not only biological aspects, but also psychological, spiritual, familiar, social, and other aspects. Therefore, the Patient should not be treated as a "clinical case", but as a Person with a unique history, personal values, and foundational relationships.

An other fundamental concept is that of human dignity. It is considered intrinsic and ontological, regardless of factors such as age, health, mental capacity, wealth, social status, ethnicity, religion, or any other individual characteristic. It is our duty to safeguard and protect the most vulnerable members of society: the terminally ill, the elderly, children, and people living in situations of socioeconomic hardship or similar circumstances.

Furthermore, Personalism emphasizes the unity of the Person, i.e., the integration between body, mind, and spiritual, social, and relational dimensions. A Person is not just a biological body, but a unique human being who lives and expresses him/herself through his/her own body.

Finally, Personalism emphasizes moral responsibility and solidarity. Medicine is not only about the close relationship between doctor and Patient, but involves also society as a whole. Therefore, healthcare decisions should be guided by a sense of responsibility towards the greatest common good. This point is particularly relevant, for instance, in public health policies, equitable distribution of medical resources, and fairness of scientific research. The principles of sociability and subsidiarity currently hold significant importance due to their impact and connection with international bodies seeking improved healthcare ("socializing Medicine") [16]. Sociability should be conceptualized as a common good: its focus on self-care and the well-being of others promotes the common good, centered on the concept of health. Socialization is intrinsic to personality, meaning that individual health also depends on the support of society itself (helping those most in need). Subsidiarity is grounded in social organizations, emphasizing respect for freedom and relationships with others, as Personalism is incompatible with individualism and promotes solidarity.

The current public health situation in Italy might requires fresh efforts in order to distribute resources fairly, allocate sufficient healthcare personnel to different areas, reduce local and regional differences. By making Patients feel that the healthcare system is stable and provides high-quality service, and by making doctors feel that they have adequate professional conditions and a sustainable workload, together by removing the ease of initiating criminal proceedings against them, it becomes more realistic to build a positive physician-Patient relationship.

The actual implementation of such a complex and well-structured relationship requires time and adequate bioethical training from the physician. Thereby, MDs should be supported with appropriate training and refresher courses on the matter. In addition, they should be given the time necessary to put what they have learned into practice: sufficient staff are needed in every clinical context to avoid work overload, and it seems essential to reduce the bureaucratic tasks of MDs in the public Italian Health Service [17,18].

SIBCE (Italian Society for Bioethics and Ethics Committees) recently issued an important statement on the matter (February 11th, 2026). In particular, it calls for the establishment of a clinical ethics consultation service in every hospital and local healthcare setting. Furthermore, it hopes that the role of clinical Bioethics will be given more concrete recognition in Italy. Its purpose is to ensure that the centrality of the Patient within the healthcare system is effectively acknowledged, with due attention to the ethical dimension of interventions, aimed at protecting health and safeguarding the life and dignity of the Person. Finally, the institutionalization of the role of the bioethicist, along with the creation of a dedicated professional registry, seems to be urgent.

This last issue is very complex, as also the Italian CNB (National Bioethics Committee) has already pointed out. A main challenge lies in balancing two conflicting demands: on the one hand, the need to establish training standards for those working in the field of Bioethics, and on the other, the need to avoid over-defining them by too rigid criteria that would undermine the complexity of Bioethics' knowledge (Cf. The role of the "bioethics expert" in the context of Ethics Committees", May 28th, 2021).

However, the rapid advances in medical science, the globalized and post-modern context, and the urgency of contemporary ethical challenges underscore the need for greater clarity and expertise. SIBCE's proposal would offer several benefits: formal recognition of the role and position of the bioethicist (removing the risk of professionals who lack adequate training and academic credentials), formal recognition of educational programs and updating through the establishment of a dedicated professional registry, support for doctors and healthcare staff in managing ethical dilemmas through professionally trained and competent assistance, recognition of the central role of the Person and their self-determination in care pathways.

Precisely this ontological dignity of human life is an object of Bioethics interest. Every life possesses its own ontological dignity: such dignity cannot be stepped on by historical, sociological, cultural or other schemes. For this reason, Bioethics involves not only Medicine but also other disciplines, e.g., Sociology, History, Psychology, Theology, Law, Anthropology, Philosophy. All them have to dialogue with no prejudices and always to uphold goodness and freedom. Bioethics has to reflect on the good for every specific

situation. It is important every single time to understand whether each step of each choice is ethical or not. It is necessary to respect freedom and peace, because without them there is no complete justice.

In conclusion, without a solid and up-to-date academic background in Global Bioethics, and without ongoing professional updating, it does not seem possible nor ethical to work as a bioethicist in today's context.

Conclusions

Bioethics has the task of addressing the moral challenges posed by the development of contemporary Medicine. The evolution of the concept of health has led to a broader and more comprehensive view of the human being, which includes not only physical dimensions, but also psychological, familial, relational, spiritual, and social dimensions.

The fundamental principles of biomedical Ethics - autonomy, beneficence, non-maleficence, and justice - provide an essential regulatory framework to guide clinical decisions and scientific research. Furthermore, Personalism can offer a deeper perspective, placing dignity and value of the human Person at the center. Through concepts such as the centrality of the Person, human dignity, the unity of the Person, and solidarity, it helps to orient Medicine toward a more humane, responsible, and respectful practice.

In an era characterized by rapid and overwhelming technological progress, and therefore by new ethical challenges, personalist Bioethics can represent a fundamental point of reference: it seeks to ensure that scientific development always remains at the service of the Person and their dignity, without inequality and always supporting the defense of life. It seeks a balance between the defense of life, freedom, responsibility, and solidarity, promoting a healthcare model that respects human dignity in all its stages and dimensions. This makes it a comprehensive approach that unites the ontological, the ethical, and the social, offering a solid framework for addressing contemporary dilemmas in Medicine and health. In such way, life is sustained with respect for every stage of age or illness, with relational respect and compassion.

As about the Italian context, there appears to be an urgent need to improve high quality bioethical training of MDs and healthcare professionals. Not only that: it is desirable that such training be designed to stimulate critical thinking and not just to provide ready-to-use operational tools. It is desirable to implement innovative teaching and pedagogical methodologies capable of supporting reflective processes for the continuous development of MD's moral and professional growth, including in the long term and throughout their professional life. Finally, the role of bioethicist should be better defined, with specific training requirements, a professional register (if feasible, currently absent) and precise decision-making, training, and consulting roles.

In this way, the general bioethical expertise of individual physicians would enable them to apply it in daily clinical practice, while the specialized bioethical expertise of bioethicists would serve as a valuable added resource, particularly in complex cases, on ethics and research committees, in training, through well-structured professional and adequate dialogue with other professionals (philosophers, theologians, lawyers, sociologists, psychologists, etc.) when necessary, and in other specific situations.

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