

## Ethical Issues in Medical Research and Patient Care

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### Abstract:

Medical field and patient care are crucial aspects of the healthcare system, aiming to improve human health and well-being. However, ethical considerations play a vital role in ensuring that research and patient care are conducted with integrity, respect for autonomy, and beneficence. This research paper examines the patient care, highlighting the importance of informed consent, privacy and confidentiality, equity in access to care, and conflicts of interest. Additionally, the paper explores ethical frameworks and guidelines that guide healthcare professionals and researchers in navigating these challenges. By addressing and resolving these ethical issues, medical research and patient care can uphold the highest standards of professionalism.

**Keywords:** Medical Research, Ethical Issues, Patient Care, privacy and confidentiality.

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### Introduction

Medical research and patient care are integral components of the healthcare system, aimed at improving health outcomes, advancing medical knowledge, and providing optimal care for individuals [1]. However, these endeavors are not without ethical implications. Ethical issues arise due to the fundamental need to balance the pursuit of scientific progress and the well-being and rights of patients involved in research studies or receiving medical treatment. Ethical considerations in medical research and patient care encompass a range [2]. Ethics in medical research involve the study of human subjects to gain insights into disease

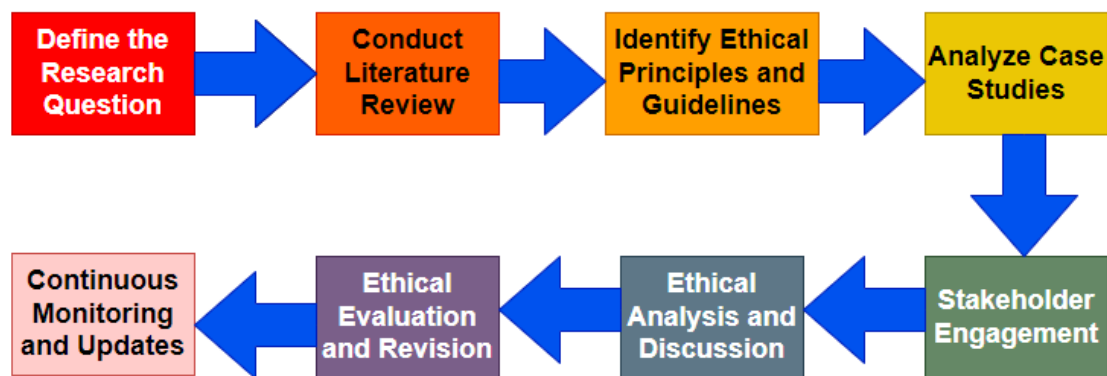
mechanisms, test new treatments, and develop innovative medical technologies. The use of human participants necessitates strict adherence to ethical guidelines and frameworks to safeguard their rights and welfare [3]. Additionally, patient care involves delivering healthcare services with utmost professionalism, empathy, and respect for individual autonomy. This research paper aims to explore the ethical issues that arise in medical research and patient care, with a focus on informed consent, privacy and confidentiality, equity in access to care, and conflicts of interest. These issues represent critical areas where ethical dilemmas can arise and require

careful consideration to ensure ethical practices and research participants [4].

Informed consent is a cornerstone of ethical research and patient care. It ensures medical intervention or participation in a research study. Privacy and confidentiality are essential to maintain trust between patients and healthcare providers or researchers, as the safeguarding of sensitive personal information is paramount [5]. Equity in access to care addresses the ethical imperative of ensuring fair and just distribution of healthcare resources, reducing disparities, and promoting equal opportunities for individuals from diverse backgrounds. Conflicts of interest, both financial and non-financial, can potentially compromise

the integrity and objectivity of medical research and patient care, emphasizing the need for transparency and appropriate management.

Throughout this paper, we will examine these ethical issues in detail, analyzing their implications, challenges, and the ethical frameworks and guidelines that guide healthcare professionals and researchers in navigating them [6]. By addressing these ethical issues with diligence and adherence to established guidelines, medical research and patient care can maintain the highest ethical standards, uphold patient rights, and promote the well-being of individuals and society as a whole. We discussed the methodology in Fig 1.



**Figure 1: Methodology on Ethical Issues in Medical Research and Patient Care**

### **Informed Consent:**

Informed consent is a fundamental ethical principle that underpins both medical research and patient care. It is a process by which individuals are provided with relevant information regarding their participation in research studies or their medical treatment, allowing them [7]. Informed consent serves to protect the rights, autonomy, and well-being of individuals, ensuring that they have the opportunity to actively participate in decisions that affect their health. In the context of medical research, obtaining informed consent is essential before

involving human participants in any study. Research subjects must be adequately informed about the study's purpose, procedures, potential risks, benefits, and any foreseeable discomfort or adverse effects [8].

In patient care, informed consent plays a pivotal role in fostering a collaborative relationship between healthcare providers and patients. Before any medical intervention or treatment, healthcare professionals must explain the diagnosis, available treatment options, potential risks and benefits, expected outcomes, and any alternatives or potential consequences of

not receiving treatment [9]. Patients should have the opportunity to ask questions, seek clarifications, and actively participate in decisions about their own healthcare. Informed consent empowers patients and contributes to their own well-being.

However, obtaining valid informed consent can present challenges in both research and clinical settings. Language barriers, limited health literacy, and cultural differences can hinder individuals' comprehension of the information provided, potentially compromising their ability to make informed decisions [10]. Furthermore, power dynamics between healthcare providers and patients or researchers and participants can influence the consent process, making individuals feel compelled to comply rather than truly exercising their autonomy. Ethical implications arise when informed consent is not obtained or is inadequately sought. Without proper consent, individuals may be exposed to unnecessary risks or deprived of the opportunity to make choices about their own healthcare. In research, lack of informed consent violates the principles of autonomy, beneficence,

and respect for persons. In clinical practice, it can undermine patient trust, erode the therapeutic relationship, and compromise the ethical duty to prioritize patients' well-being.

To address these ethical issues, guidelines and regulations have been established to ensure the proper implementation of informed consent [11]. In clinical practice, healthcare providers are guided by ethical codes, professional guidelines, and legal frameworks that emphasize, In view, informed consent is a critical ethical issue in both medical research and patient care. It is essential for respecting individual autonomy, protecting patient rights, and promoting ethical conduct [12]. Adequate communication, clear information provision, and an understanding of individual circumstances are vital to obtaining valid informed consent. By upholding the principles of informed consent, researchers and healthcare professionals can ensure that individuals are partners in their own healthcare decisions, promoting ethical practice and maintaining trust and respect in the medical field.



**Figure 2: Methods on Ethical Issues in Medical Research and Patient Care**

**Privacy and Confidentiality:**

Privacy and confidentiality are paramount ethical considerations in both medical research and patient care. They involve safeguarding sensitive personal information and ensuring that individuals' privacy rights are respected, promoting trust, and maintaining the confidentiality of their medical information. Protecting privacy and maintaining confidentiality are not only upholds ethical principles but also legal requirements and professional standards [13].

In the context of medical research, privacy and confidentiality play a crucial role in protecting the identities and personal information of research participants. Researchers must implement appropriate measures to ensure that participants' data is collected, stored, and shared securely. This includes anonymizing or de-identifying data whenever possible to minimize the risk of re-identification. Research participants must be assured that their personal information will remain confidential and that their privacy will be protected throughout the research process. Failure to maintain privacy and confidentiality can lead to breaches of trust, compromise the rights of individuals, and potentially discourage participation in research studies [14]. Similarly, in patient care, privacy and confidentiality are essential to establish and maintain a trusting relationship between healthcare providers and patients. Medical professionals are bound by legal and ethical obligations to protect the privacy of patients' medical information and ensure its confidentiality. This includes maintaining the confidentiality of medical records, limiting access to authorized personnel, and implementing secure data management systems [15]. Advancements in technology and electronic health records (EHRs) have brought new challenges to privacy and confidentiality. Electronic storage and exchange of medical information offer benefits such as

improved accessibility and coordination of care. However, they also increase and unauthorized access to personal health information. It protects sensitive data, including encryption, access controls, and regular audits of data systems. Furthermore, clear policies and procedures should be in place to guide the appropriate sharing and disclosure of patient information for research purposes, ensuring that privacy is maintained and individual rights are respected.

They may result in harm to individuals, including social stigmatization, discrimination, or loss of trust in the healthcare system. Additionally, breaches can compromise the integrity of medical research, as confidentiality breaches may lead to biased or distorted data if participants are not confident that their information will be handled appropriately [16].

To address these ethical issues, healthcare organizations and research institutions have implemented privacy policies, data protection measures, and compliance with laws. Healthcare professionals and researchers are obligated to adhere to these guidelines, ensuring the responsible and ethical use of personal health information. In conclusion, privacy and confidentiality are critical ethical issues in both medical research and patient care. Respecting individuals' privacy rights, safeguarding their personal information, and maintaining confidentiality are essential for building trust, respecting autonomy, and upholding ethical principles. By implementing robust privacy and confidentiality measures, healthcare providers and researchers can protect patient rights, maintain the integrity of medical research, and foster a climate of trust and confidence in the healthcare system.

**Equity in Access to Care:**

Equity in access to care is a significant ethical issue in medical research and

patient care. It refers to the fair and just distribution of healthcare resources, services, and opportunities, ensuring that all individuals have equal access to quality care regardless of their socio-economic status, geographic location, race, gender, or other factors. Upholding equity in access to care is crucial for promoting social justice, reducing health disparities, and improving overall health outcomes for diverse populations.

Healthcare disparities arise due to various factors, including structural inequalities, socio-economic disparities, and systemic biases within the healthcare system. These disparities can result in differential access to medical research opportunities, diagnostic services, treatments, and preventive care. Ethical considerations demand that healthcare professionals and researchers strive to address these disparities and ensure equitable access to care [17]. Ethical obligations dictate that healthcare resources be allocated based on medical need rather than on social or economic advantage. In practice, this means that efforts should be made to provide healthcare services to underserved communities and marginalized populations who may face barriers to access, such as financial constraints or limited healthcare infrastructure. To promote equity in access to care, healthcare systems and research institutions must actively work towards eliminating barriers and improving healthcare delivery. This may involve implementing outreach programs, mobile clinics, or telehealth services to reach underserved populations. It may also require adapting research protocols to include diverse populations and ensuring that research findings are applicable and relevant to a wide range of individuals.

Ethical guidelines and frameworks, such as the principle of justice outlined in the Belmont Report, emphasize the importance of equitable access to healthcare resources. These guidelines underscore the need to prioritize

vulnerable populations and ensure that the benefits of medical research and advancements in patient care are accessible to all.

Addressing equity in access to care requires collaboration among healthcare providers, researchers, policymakers, and community organizations. Efforts should focus on identifying and reducing systemic barriers that impede access to care, advocating for policies that promote health equity, and actively involving communities in decision-making processes related to healthcare and research.

It is important to acknowledge that achieving complete equity in access to care may be challenging due to the complex interplay of social, economic, and structural factors. However, ongoing commitment and proactive measures can help reduce disparities and move towards a more equitable healthcare system.

In this paper, equity in access to care is an ethical imperative in medical research and patient care. Ethical principles demand that healthcare resources and opportunities be distributed fairly, circumstances. By addressing healthcare disparities, advocating for social justice, and implementing strategies to improve access for underserved populations, healthcare professionals and researchers can work towards a more equitable healthcare system that upholds the rights and well-being of all individuals.

#### **Conflicts of Interest:**

It can be financial, professional, personal, or organizational in nature [18]. In medical research, conflicts of interest can occur when researchers or institutions have financial relationships or other affiliations that may bias the design, conduct, or reporting of research studies. For example, if a researcher has financial ties to a pharmaceutical company whose drug is being studied, there is a potential conflict between their financial interest and the objectivity required to conduct unbiased

research. Such conflicts can lead to biased interpretation of results, selective reporting, or undue influence on the design and outcomes of the study. Conflicts of interest also arise in patient care when healthcare professionals have financial relationships or other interests that may influence their treatment decisions. For instance, if a physician receives financial incentives or benefits from a specific pharmaceutical company for prescribing their drugs, it may impact their prescribing practices, potentially compromising the best interests of patients. Conflicts of interest in patient care can undermine the trust between patients and healthcare providers, erode the integrity of medical decision-making, and jeopardize patient outcomes.

Transparency and disclosure play a central role in addressing conflicts of interest. Researchers, healthcare professionals, and institutions should disclose any potential conflicts of interest to ensure transparency and enable stakeholders to make informed decisions. Disclosure allows patients, research participants, and the public to assess any potential biases and evaluate the credibility of the information or recommendations provided. In addition to disclosure, appropriate management of conflicts of interest is essential. This may involve establishing institutional policies and guidelines to govern conflicts of interest, implementing independent oversight bodies, and establishing mechanisms for evaluating and mitigating conflicts. For example, research institutions often require researchers to disclose financial relationships and may impose restrictions on their involvement in studies where conflicts exist. Similarly, healthcare organizations may develop policies to regulate financial relationships between healthcare providers and external entities to minimize the potential for conflicts of interest in patient care.

Ethical guidelines and professional codes of conduct provide further guidance in

addressing conflicts of interest. These guidelines emphasize the importance of maintaining objectivity, prioritizing patient welfare, and ensuring that decisions are based on the best available evidence and clinical judgment, rather than influenced by personal or financial considerations. Efforts to address conflicts of interest require ongoing vigilance, education, and a commitment to upholding the highest ethical standards. By promoting transparency, implementing appropriate management strategies, and prioritizing the best interests of patients and research participants, conflicts of interest can be effectively identified, disclosed, and managed to safeguard the integrity of medical research and patient care. In conclusion, conflicts of interest present ethical challenges in both medical research and patient care. They have the potential to compromise objectivity, introduce bias, and undermine the trust and integrity of healthcare practices. It prioritizes patient welfare, and promote the trust and confidence of the public in the medical field.

### **Ethical Frameworks and Guidelines:**

Ethical frameworks and guidelines play a crucial role in guiding ethical conduct in medical research and patient care [19]. It provides guidelines for researchers, physicians, and other healthcare professionals involved in research. The declaration emphasizes the need for informed consent, participant protection, and ethical review by independent ethics committees. It has been widely adopted and serves as a cornerstone for ethical conduct in medical research globally.

### **Nuremberg Code:**

The Nuremberg Code emerged in response to the unethical experiments conducted during World War II. It establishes principles for ethical research, including voluntary informed consent, minimizing risks, conducting experiments based on sound scientific principles, and protecting

participants from harm. Although the Nuremberg Code is not legally binding, it has had a significant influence on subsequent ethical guidelines.

It provides guidelines for ethical research conduct, data integrity, participant protection, and regulatory compliance. GCP ensures that clinical trials are conducted to high ethical and scientific standards, with an emphasis on protecting participant rights and ensuring the reliability and validity of research data.

**Professional Codes of Ethics:** Various professional organizations have developed codes of ethics specific to medical research or patient care. The World Health Organization (WHO) and other professional bodies have established codes that outline ethical principles and responsibilities for healthcare professionals and researchers. These codes often address issues such as informed consent, privacy, confidentiality, conflicts of interest, and equitable access to care.

**Institutional Policies and Guidelines:** Research institutions, hospitals, and healthcare organizations often develop their own policies and guidelines to address ethical issues in research and patient care. These policies may cover a wide range of topics, including informed consent procedures, privacy and confidentiality, conflict of interest management. Institutional policies ensure that ethical standards are upheld within the specific organizational context. By adhering to these ethical frameworks and guidelines, healthcare professionals, researchers, and institutions can navigate the complex ethical issues in medical research and patient care. These frameworks provide a foundation for promoting patient autonomy, protecting rights, ensuring participant welfare, and maintaining the integrity of research and healthcare practices. They serve as a critical reference for decision-making, ethical review processes, and the

establishment of policies and procedures that govern ethical conduct.

### **Ethical Challenges in Emerging Technologies:**

Emerging technologies have revolutionized various aspects of medical research and patient care, offering unprecedented opportunities for improved diagnostics, treatment, and healthcare delivery. However, along with their potential benefits, these technologies also present unique ethical challenges that must be addressed to ensure responsible and ethical practices. This section examines some of the key ethical issues arising from emerging technologies and their impact on medical research and patient care.

### **Genetic Research and Personalized Medicine:**

Genetic research and personalized medicine hold great promise for tailoring treatments to individual patients based on their genetic profiles. However, this raises ethical concerns regarding informed consent, privacy, and the potential for discrimination. The collection and storage of genetic data must be accompanied by stringent privacy protections to safeguard individuals' sensitive information. Additionally, clear guidelines are needed to navigate the ethical implications of genetic testing and the potential psychosocial consequences for patients and their families.

It algorithms are increasingly being used in medical research and patient care, assisting in diagnostics, treatment planning, and predicting patient outcomes. Ethical challenges arise regarding the transparency and explainability of AI algorithms, as well as the potential for bias in training data. Ensuring that AI systems are robust, unbiased, and aligned with patient interests is crucial to maintain trust and avoid unintended harm. Ethical guidelines should address issues such as accountability, equity, and human

oversight in AI-enabled healthcare systems.

### **Telemedicine and Remote Patient Monitoring:**

Telemedicine has gained prominence, particularly in remote or underserved areas, allowing patients to access healthcare remotely. While telemedicine offers convenience and increased access, ethical concerns arise regarding patient autonomy, privacy, and the quality of care delivered. Ensuring informed consent, protecting patient privacy during remote consultations, and maintaining the same standards of care as in traditional healthcare settings are important considerations in telemedicine.

### **Big Data and Health Information Exchange:**

The widespread availability of electronic health records and the ability to share health information across different institutions and research settings have facilitated large-scale data analysis and research collaborations. However, ethical challenges arise in relation to privacy, informed consent, and data ownership. Striking a balance between sharing health data for research purposes and protecting individuals' privacy rights requires clear policies, robust data anonymization techniques, and transparent governance frameworks. It is such as pacemakers, insulin pumps, and fitness trackers, offer real-time health monitoring and personalized interventions. Ethical considerations include ensuring informed consent, privacy, data security, and potential vulnerabilities to hacking or misuse. Patients should be well-informed about the risks and benefits of these devices, and prevent unauthorized access to their personal health data. Addressing these ethical challenges requires a multi-stakeholder approach involving healthcare professionals, researchers, policymakers, ethicists, and patients. Ethical guidelines and regulatory frameworks need to be

updated and adapted to keep pace with rapidly evolving technologies. Additionally, ongoing ethical training and education for healthcare professionals and researchers are crucial to ensure a deep understanding of the ethical implications associated with emerging technologies.

In the views, emerging technologies have, but they also introduce novel ethical challenges. By proactively addressing these ethical issues, healthcare stakeholders can harness the benefits of emerging technologies while upholding ethical principles, protecting patient rights, and ensuring equitable and responsible healthcare practices. Ethical considerations must remain at the forefront of decision-making processes to maximize the potential benefits of emerging technologies while minimizing potential harms and risks to patients and research participants.

### **Fairness and Equity:**

Fairness and equity are fundamental ethical principles that play a crucial role in medical research and patient care. Ensuring equal access to healthcare services, research opportunities, and the fair allocation of resources are essential for promoting justice and avoiding healthcare disparities. This section focuses on the ethical challenges related to fairness and equity and provides recommendations to address them effectively.

### **Addressing Disparities in Healthcare and Research Participation:**

Develop strategies to reduce barriers to healthcare access for underserved populations, including improving healthcare infrastructure, providing culturally competent care, and expanding healthcare coverage. Implement outreach programs to increase research participation among marginalized communities, ensuring that research studies reflect the diversity of the population.



**Promoting Equal Access to Healthcare and Research Opportunities:**

Advocate for policies and programs that promote universal access to healthcare, including preventive services, early interventions, and treatments. Ensure that healthcare services are distributed based on need rather than factors such as income or social status. Establish guidelines for the equitable allocation of research funding, resources, and access to investigational treatments, prioritizing projects that address health disparities and benefit disadvantaged populations.

**Ethical Considerations in Resource Allocation:**

Develop transparent and inclusive processes for resource allocation, such as organ transplantation, scarce medical supplies, and research funding. Prioritize patients and research studies based on clinical need, urgency, and potential impact on public health. Implement policies that address conflicts of interest and prevent preferential treatment based on personal or financial relationships.

**Enhancing Health Literacy and Patient Empowerment:**

Promote health literacy initiatives to empower patients and communities with knowledge about their rights, healthcare options, and the importance of research participation. Foster effective doctor-patient communication, ensuring that patients have access to understandable information to make informed decisions about their care and research participation. Collaborate with community organizations and patient advocacy groups to address health disparities, improve health education, and promote patient-centered care.

**Implementing Cultural Sensitivity and Competence:**

Develop cultural competence training programs for healthcare professionals to enhance their understanding of diverse

patient populations and reduce bias in healthcare delivery and research. Incorporate cultural considerations into research design, recruitment strategies, and informed consent processes to ensure inclusivity and respect for diverse cultural norms and values. Engage community leaders and stakeholders in the planning and implementation of research and healthcare initiatives to ensure cultural relevance and community buy-in.

**Monitoring and Evaluating Equity in Healthcare and Research:**

Establish mechanisms to monitor and assess the impact of policies and interventions on promoting fairness and equity in healthcare and research. Regularly collect and analyze data on healthcare disparities, research participation rates, and health outcomes across different populations. Use data-driven insights to guide policy development, resource allocation, and targeted interventions to address identified disparities. By implementing these recommendations, healthcare systems, researchers, and policymakers can work towards creating a more equitable healthcare landscape that prioritizes fairness, addresses disparities, and ensures that all individuals have access to quality care and research opportunities. Upholding fairness and equity in medical research and patient care is not only an ethical imperative but also essential for promoting social justice and achieving improved health outcomes for all.

**Results and discussion**

In patient care, informed consent allows individuals to make autonomous decisions about their treatment options. Privacy and Confidentiality: Safeguarding patients' privacy and maintaining confidentiality are critical to protect sensitive medical information. Researchers and healthcare professionals must adhere to strict protocols and laws to prevent unauthorized

access or disclosure of patient data. All

data values are given by Table 1 to Table 3

**Table 1: Informed Consent on Patient Care**

S. No.	Nature	Purpose	Risks	Benefits	Alternatives
1	12	12	31	31	18
2	32	32	11	32	11
3	42	31	12	41	21
4	51	41	23	43	23
5	21	52	24	54	33
6	31	53	45	55	35
7	14	24	53	61	45

**Table 2: Balancing Benefits and Risks on health care in Probabilistic approach**

S. No.	Potential Risks	Benefits Of Interventions,	Treatments	Strive
1	0.5	0.3	0.1	0.1
2	0.4	0.2	0.2	0.2
3	0.3	0.2	0.2	0.3
4	0.6	0.1	0.1	0.2
5	0.7	0.1	0.1	0.1
6	0.6	0.1	0.1	0.2
7	0.5	0.2	0.2	0.1

**Table 3: End-of-Life Care % in different sources**

S. No.	patient autonomy	decision-making capacity	advance directives	palliative care
1	70	81	89	90
2	75	86	89	90
3	80	91	95	80
4	85	96	91	70
5	82	94	94	75
6	85	76	79	79
7	80	71	70	84
8	79	75	70	90
9	82	86	80	82
10	79	82	80	87

**Equitable Access:** Ensuring equitable access to medical research and patient care is an ethical imperative. Addressing disparities in healthcare and research participation is crucial to promote justice and fairness, particularly among marginalized populations who may face barriers to access and involvement. Researchers and healthcare professionals have a responsibility to maximize benefits while minimizing risks and potential harm to patients. **Scientific Integrity:** Upholding scientific integrity is fundamental to medical research. Researchers must conduct studies ethically, using rigorous

methodologies, transparent reporting, and unbiased analysis of data. This ensures the reliability and reproducibility of findings, preventing harm and promoting the advancement of medical knowledge. **Global Considerations:** Ethical issues in medical research and patient care extend beyond national boundaries. Conducting research in low-income countries or using data from vulnerable populations requires additional ethical considerations, including respect for cultural norms, collaboration with local communities, and ensuring fair benefit sharing. Addressing these ethical issues requires ongoing dialogue,

interdisciplinary collaboration, and adherence to established guidelines and regulations. Striking a balance between scientific advancement, patient welfare, and ethical responsibilities is essential to foster trust, protect human rights, and promote the overall well-being of individuals and society in medical research and patient care. Ethical issues in medical research and patient care are complex and multifaceted, requiring careful consideration and ongoing attention. In conclusion, these issues have significant implications for both individuals and society as a whole. Here are some key points to consider: Inpatient care, informed consent allows individuals to make autonomous decisions about their treatment options. Privacy and Confidentiality: Safeguarding patients' privacy and maintaining confidentiality are critical to protect sensitive medical information. Researchers and healthcare professionals must adhere to strict protocols and laws to prevent unauthorized access or disclosure of patient data.

**Equitable Access:** Ensuring equitable access to medical research and patient care is an ethical imperative. Addressing disparities in healthcare and research participation is crucial to promote justice and fairness, particularly among marginalized populations who may face barriers to access and involvement.

Researchers and healthcare professionals have a responsibility to maximize benefits while minimizing risks and potential harm to patients. Scientific Integrity: Upholding scientific integrity is fundamental to medical research. Researchers must conduct studies ethically, using rigorous methodologies, transparent reporting, and unbiased analysis of data.

This ensures the reliability and reproducibility of findings, preventing harm and promoting the advancement of medical knowledge. Global Considerations: Ethical issues in medical research and patient care extend beyond national boundaries. Conducting research in low-income countries or using data from vulnerable populations requires additional ethical considerations, including respect for cultural norms, collaboration with local communities, and ensuring fair benefit sharing. Addressing these ethical issues requires ongoing dialogue, interdisciplinary collaboration, and adherence to established guidelines and regulations. Striking a balance between scientific advancement, patient welfare, and ethical responsibilities is essential to foster trust, protect human rights, and promote the overall well-being of individuals and society in medical research and patient care. The graphical representation are given by Fig 3 to Fig 5 for the all the data analysis.

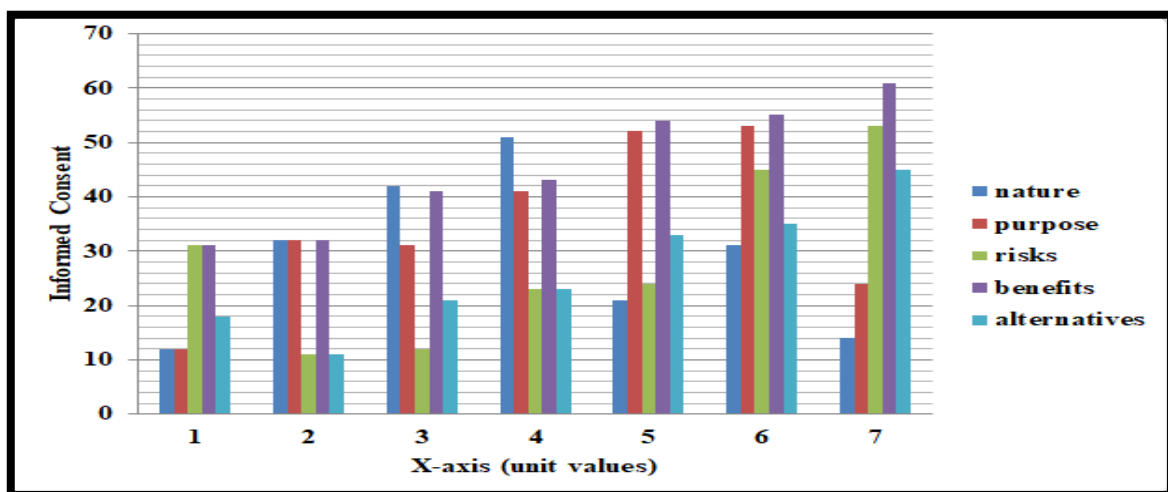


Figure 3: Bar chart for the Informed Consent on Patient Care

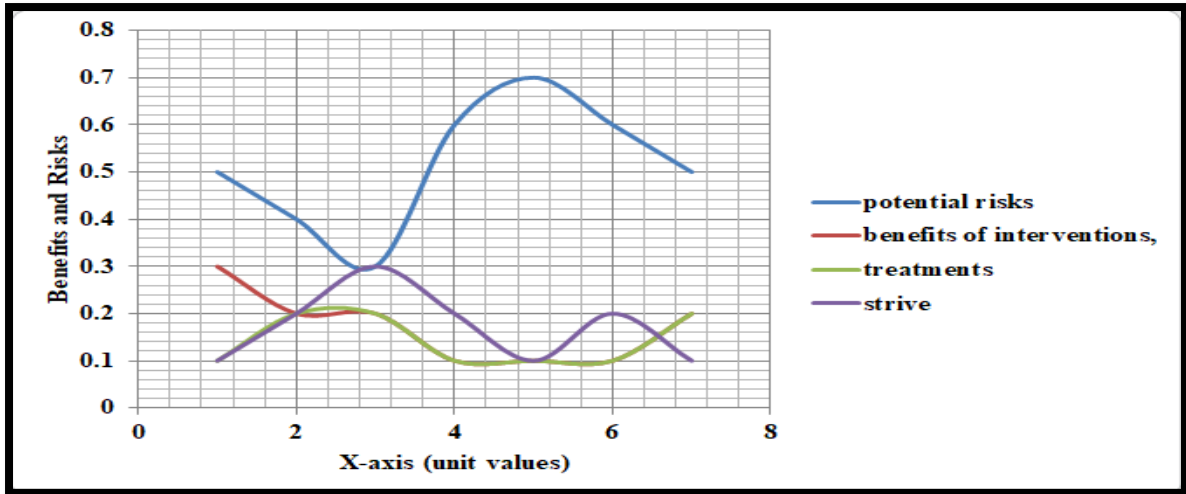


Figure 4: Line chart for Balancing Benefits and Risks on health care in Probabilistic approach

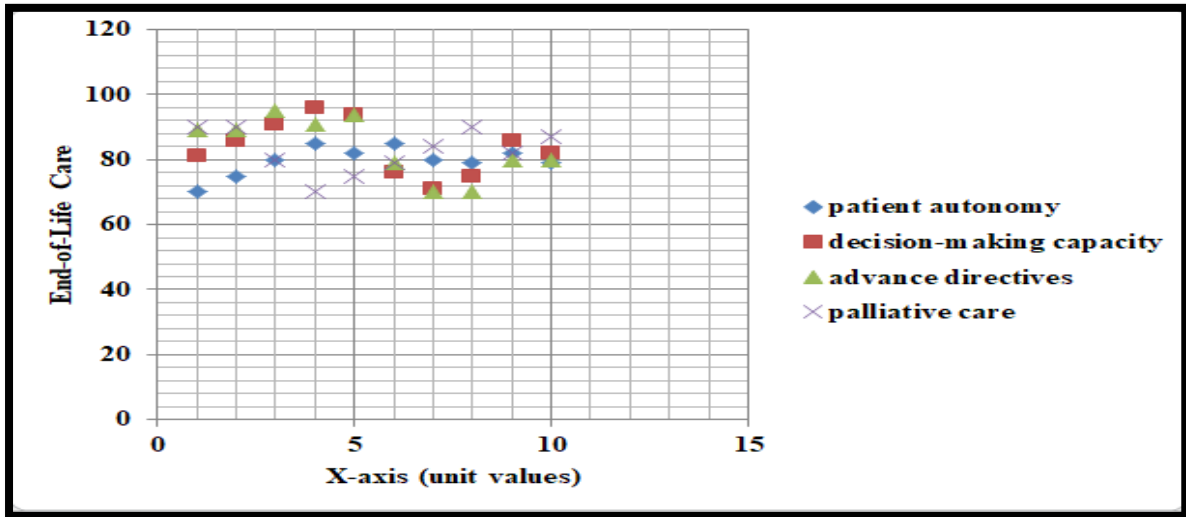


Figure 5: Scatter diagram for End-of-Life Care % in different sources

**Conclusion**

Ethical issues in medical research and patient care are of paramount importance, as they involve crucial decisions that impact the well-being and autonomy of individuals. Informed consent, privacy and confidentiality, equitable access to healthcare, and the responsible use of emerging technologies are key ethical issues that must be carefully navigated to ensure the highest standards of patient care and research integrity.

Collaborative efforts among healthcare professionals, researchers, regulatory bodies, and policymakers are essential in developing and enforcing ethical

guidelines that protect patients' rights and ensure ethical conduct throughout the healthcare and research sectors. By prioritizing ethical considerations, we can foster trust, enhance patient outcomes, and uphold the fundamental principles of beneficence, non-maleficence, autonomy, and justice in both medical research and patient care.

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### **Institutional Ethical Committee approval:**

Nandha Medical College and Hospital, Erode College's intuitional Ethical Committee assessed and approved the survey project. Informed consent obtained from all the participants.

### **Author Contributions:**

**Dr G Mahalakshmi:** Conceptualization, data curation, investigation, methodology, project administration, visualization, writing original draft, writing review and editing.

**Dr S.N. Saravin:** Conceptualization, methodology, writing original draft, writing review and editing.

**Dr Senthil Kumar Sivananthan:** Conceptualization, visualization, supervision, writing—original draft.

**Dr Kamala Veni:** Methodology, writing—original draft, writing—review and editing. All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work. All authors have read and agreed to the published version of the manuscript.

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