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Biology department

M1 immunology

Bioethics

Tutorial 1

Exercise 1: Introduction to Bioethics

1. Bioethics is best described as:

- A) The study of biological sciences.
- B) The application of ethical principles to issues arising from the life sciences and healthcare.
- C) A branch of philosophy focused exclusively on medical practice.
- D) The legal framework governing medical practice and research.

2. The term 'bioethics' was first coined in:

- A) The late 18th century.
- B) The early 20th century.
- C) The mid-19th century.
- D) The late 20th century.

3. Which of the following issues is NOT typically considered within the field of bioethics?

- A) Environmental conservation.
- B) Patient confidentiality.
- C) Genetic engineering.
- D) Corporate governance.

4. The primary focus of bioethics is to:

- A) Resolve legal disputes in healthcare.
- B) Address ethical issues in biology and medicine.
- C) Promote the use of technology in medical research.
- D) Enhance the profitability of healthcare institutions.

5. Case Study: A new vaccine has been developed and is ready for public distribution. Discuss the ethical considerations involved in prioritizing who receives the vaccine first, considering principles of bioethics.

Exercise 2: Historical Perspectives in Bioethics

1. The Nuremberg Code (1947) is significant in the history of bioethics because it:

- A) Established the first code of medical ethics.
- B) Outlined ethical principles for conducting human experimentation.
- C) Introduced the concept of informed consent.
- D) B and C are correct.

2. Which event significantly influenced the development of bioethics as a distinct field?

- A) The discovery of penicillin.
- B) The publication of Rachel Carson's "Silent Spring".
- C) The Tuskegee Syphilis Study.
- D) The invention of the stethoscope.

3. The Belmont Report (1979) emphasized which of the following ethical principles?

- A) Respect for persons, beneficence, and justice.
- B) Autonomy, non-maleficence, and fidelity.
- C) Confidentiality, autonomy, and beneficence.
- D) Justice, respect for persons, and non-maleficence.

4. Henrietta Lacks' case highlights ethical issues in:

- A) Patient consent for treatment.
- B) Use of personal medical information.
- C) Use of human cells for research without consent.
- D) Allocation of healthcare resources.

5. Case Study: Reflect on the impact of the Tuskegee Syphilis Study on the development of ethical guidelines in research. Discuss the ethical breaches and their implications for future research practices.

Exercise 3: Fundamental Ethical Theories in Bioethics

1. Utilitarianism in bioethics argues that:

- A) Actions are right if they benefit the individual, regardless of societal impact.
- B) The morality of an action depends on its consequences for the greatest number.
- C) Moral principles are fixed and apply universally, regardless of outcomes.
- D) Ethical decisions should prioritize duty over consequences.

2. Deontological ethics focuses on:

- A) The balance of benefits and harms.
- B) The consequences of actions.
- C) The inherent morality of actions.
- D) Maximizing happiness for the most people.

3. Virtue ethics in the context of bioethics emphasizes:

- A) The outcomes of healthcare decisions.
- B) Adherence to universal moral laws.
- C) The character and virtues of the healthcare provider.
- D) The principle of utility.

4. Which ethical theory is most concerned with the distribution of resources and justice?

- A) Utilitarianism
- B) Deontological ethics
- C) Virtue ethics
- D) Egalitarianism

5. Case Study: A hospital must allocate a limited number of ICU beds. Discuss how different ethical theories would approach this dilemma.

Exercise 4: Principles of Bioethics

1. Which principle of bioethics is primarily concerned with doing good for the patient?

- A) Autonomy
- B) Beneficence
- C) Non-maleficence

D) Justice

2. Respect for autonomy requires healthcare providers to:

A) Always agree with the patient's decisions.

B) Make decisions for patients based on what is perceived as beneficial.

C) Ensure patients have the information and freedom to make their own decisions.

D) Distribute healthcare resources equally among all patients.

3. Non-maleficence means:

A) Providing benefits to others.

B) Treating others fairly and equally.

C) Avoiding harm to others.

D) Respecting others' decisions and privacy.

4. Justice in bioethics often refers to:

A) The personal virtues of healthcare professionals.

B) The fair distribution of healthcare resources.

C) The obligation to obey legal standards.

D) The duty to respect patient confidentiality.

5. Case Study: A patient with a non-life-threatening condition requests an expensive treatment that is marginally better than a cheaper alternative. Discuss the ethical considerations involved in deciding whether to provide the treatment, considering the principles of beneficence, non-maleficence, and justice.

Exercise 5: Contemporary Issues in Bioethics

1. The ethical debate surrounding euthanasia often involves balancing:

A) The principles of beneficence and non-maleficence.

B) The cost of healthcare resources.

C) The rights of healthcare providers versus patients.

D) The technological capabilities of healthcare.

2. In the context of genetic testing, privacy concerns primarily involve:

A) The risk of physical harm to the patient.

B) The potential for psychological distress.

C) The possibility of insurance discrimination.

D) The accuracy of the tests.

3. The concept of 'informed consent' is particularly complex in which of the following scenarios?

A) Routine vaccinations

B) End-of-life care decisions

C) Participation in a low-risk clinical trial

D) Genetic testing for hereditary diseases

4. Which of the following is a key ethical concern in the use of artificial intelligence in healthcare?

A) The speed of AI decision-making

B) The potential for AI to replace human healthcare providers

C) Ensuring transparency and accountability in AI algorithms

D) The cost of implementing AI technologies

5. Case Study: A family learns through prenatal genetic testing that their unborn child has a gene associated with a severe, incurable disease. Discuss the ethical considerations surrounding their decision whether to continue the pregnancy, focusing on autonomy, beneficence, non-maleficence, and justice.

(Consider the implications of genetic information, patient autonomy, and the potential for harm or benefit.)