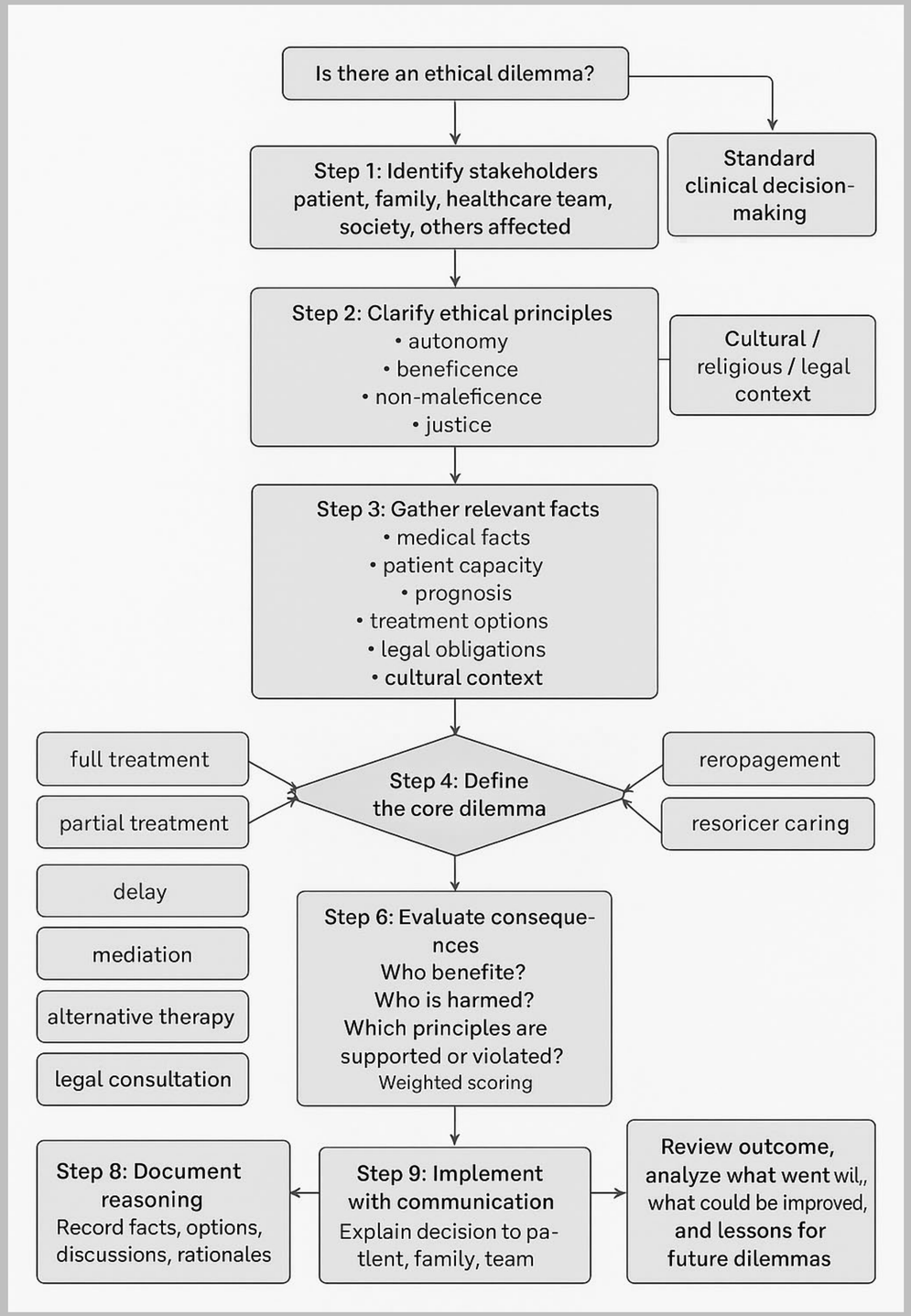
Medical ethics

From Hippocrates to AI: The Evolution of Medical Ethics


Is there an ethical dilemma?
Standard clinical decision-making
Step 1: Identify stakeholders patient, family, healthcare team, society, others affected
Step 2: Clarify ethical principles
• autonomy
• beneficence
• non-maleficence
• justice
Cultural / religious / legal context
Step 3: Gather relevant facts
• medical facts
• patient capacity
• prognosis
• treatment options
• legal obligations
• cultural context
full treatment
partial treatment
Step 4: Define the core dilemma
reropagement
resoricer caring
delay
mediation
alternative therapy
legal consultation
Step 6: Evaluate consequences
Who benefite?
Who is harmed?
Which principles are supported or violated?
Weighted scoring
Step 8: Document reasoning
Record facts, options, discussions, rationales
Step 9: Implement with communication
Explain decision to patient, family, team
Review outcome, analyze what went wil,, what could be improved, and lessons for future dilemmas

Medical Ethics, or Bioethics

the study of **moral issues** and **duties** arising in medical practice, research, and healthcare policy.

It's about **guiding** physicians and **healthcare professionals** to **do what is right for patients**, **society**, and **themselves**.

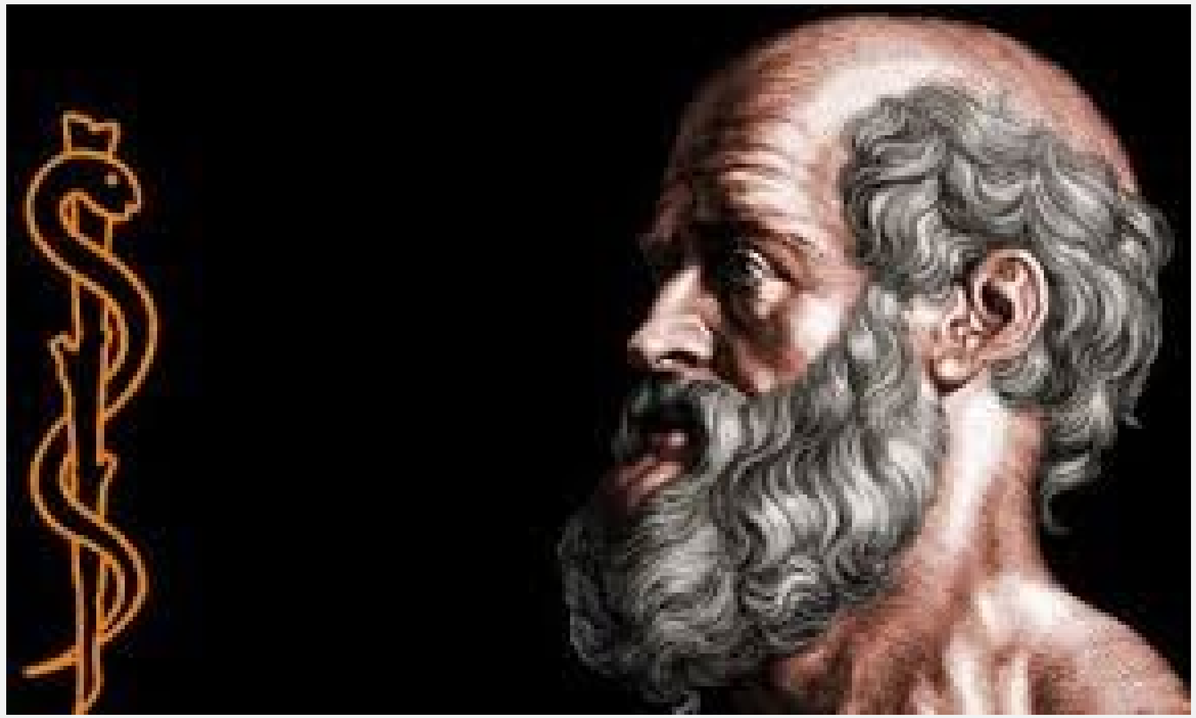
Medical ethics also covers practical areas:

*informed consent
*confidentiality
*end-of-life decisions
*allocation of scarce resources
*research ethics
*emerging issues like genetic testing and AI in medicine

This presentation is a focused review of the most important aspects of all these areas as they pertain to clinical practice

Historically:

The earliest structured medical ethics is:



—

Hippocratic Oath

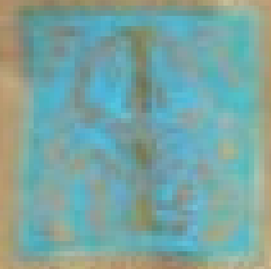
(~5th century BCE, Greece)

which stressed **beneficence**

(“help the sick”)

and **non-maleficence** (“do no harm”).

HIPPOCRATIC OATH



I SWEAR by Apollo the physician and Asclepius and Hygieia and Panacea, invoking all the gods and goddesses to be my witnesses, that I will fulfil this Oath and this written covenant to the best of my powers and of my judgment. I will look upon him who shall have taught me this art even as on mine own parents; I will share with him my substance, and supply his necessities if he be in need; I will regard his offspring even as my own brethren, and will teach them this art, if they desire to learn it, without fee or covenant.

I WILL IMPART it by precept, by lecture and by all other manner of teaching, not only to my own sons but also to the sons of him who has taught me, and to disciples bound by covenant and oath according to the law of the physicians but to none other.

THE REGIMEN I adopt shall be for the benefit of the patients to the best of my power and judgment, not for their injury or for any wrongful purpose. I will not give a deadly drug to any one, though it be asked of me, nor will I lead the way in such counsel, and likewise I will not give a woman a pessary to procure abortion. But I will keep my life and my art in purity and holiness. I will not use the

Historically:

- The earliest structured medical ethics is the **Hippocratic Oath** (~5th century BCE, Greece), which stressed:

- beneficence (“help the sick”)

- and non-maleficence (“do no harm”).

For centuries, ethics was rooted in

physician virtue and a **paternalistic model** —

the doctor decided what was best, often without informing or involving the patient. This fit the cultural and societal norms of the time, where authority figures were rarely questioned.

physician virtue

a **paternalistic model**

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Paternalism in medicine

Up until the **mid-20th century**, the prevailing belief was that

“the physician knew best and should protect the patient from information that might distress them”.

This meant :
diagnoses like cancer were often withheld, and consent was minimal or nonexistent

—> patients were expected to

<comply>

In many cultures, especially in the Middle East, parts of Asia, and Europe, **paternalism** was reinforced by :

social hierarchies and
trust in authority

Shift to modern medical ethics:

•The turning point came after **World War II** with:

• the **Nuremberg Trials (1947)** and the **Nuremberg Code**, which set international standards for informed consent in research after Nazi medical atrocities.

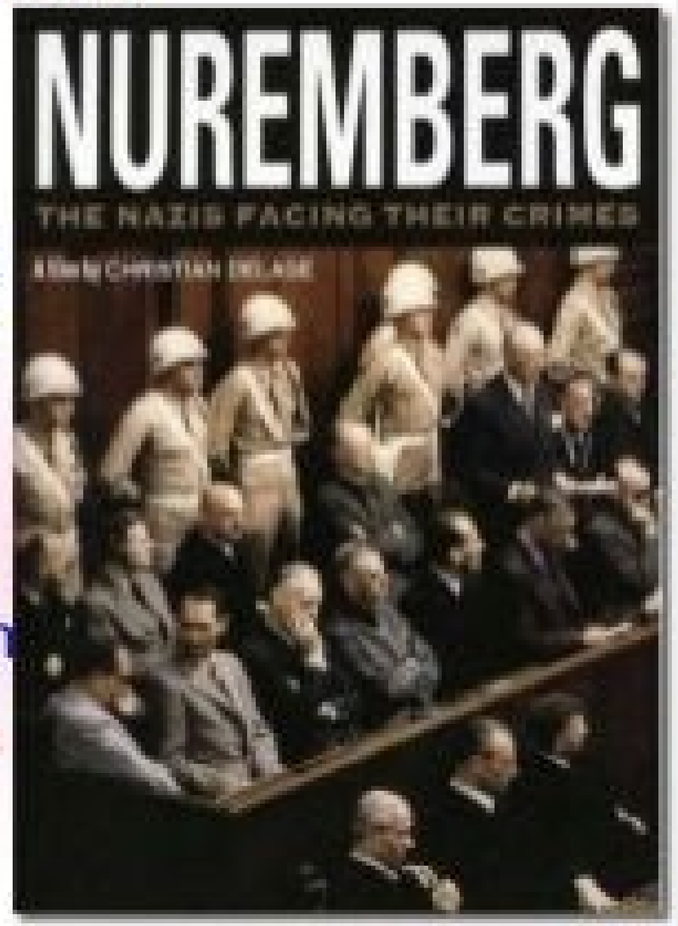
•In the **1960s–70s**, social change, civil rights movements, and patient advocacy fueled the idea that patients should be informed and actively involved in decisions.

•The **Belmont Report (1979)** in the US outlined the three pillars of modern bioethics: respect for persons (autonomy), beneficence, and justice.

•From the 1980s onward, **autonomy** became the dominant principle in most Western medical ethics, while paternalism became the exception rather than the rule.

COURT DISCUSSION

- On August 19, 1947, the judges delivered their verdict in the "Doctors' Trial" against Karl Brandt and several others. They also delivered their opinion on medical experimentation on human beings.



Nuremberg trials

the **Nuremberg Trials (1947)** and the **Nuremberg Code**, which set international standards for informed consent in research after Nazi medical atrocities.

Nuremberg Code

1. Voluntary informed consent
2. Fruitful result for the good of the society
3. Prior experimentation on animals and prior knowledge of the problems
4. Avoidance of unnecessary physical or mental injury
5. Banning of known lethal or disable procedures
6. Degree of risks should exceed benifits
7. Proper preparation and proper facilities to prevent injury or death
8. Performance of experiments only by scientifically qualified persons
9. Participants may freely end the experimentation.
10. The experiments must stop if it proves too dangerous

- In the **1960s–70s**, social change, civil rights movements, and patient advocacy fueled the idea that patients should be informed and actively involved in decisions.

1964 – Declaration of Helsinki

- Developed by the **World Medical Association**.
- Expanded Nuremberg Code principles for **practical application in medical research**.
- Emphasized physician's responsibility, risk–benefit analysis, independent ethics review, and participant welfare over science.
- Revisions: 1975, 1983, 1989, 1996, 2000, 2008, 2013 (last revision).

The **Belmont Report (1979)** in the US outlined the **three pillars of modern bioethics**:

I -respect for persons (autonomy)

1. Treat individuals as autonomous agents.
2. Provide special protection for those with diminished autonomy (e.g., children, cognitively impaired).
3. Requires *informed consent*.

II -beneficence

1. Maximize possible benefits.
2. Minimize possible harms.
3. Obligation to assess risk–benefit ratio in research.

III -justice

1. Fair distribution of the benefits and burdens of research.
2. Avoid exploiting vulnerable groups.
3. Ensure equitable subject selection.

The **Belmont Report** is a foundational document in modern medical and research ethics.

It was published in **1979** by the U.S. National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research.

Why it was created:
It was written in response to serious ethical abuses in research, especially the **Tuskegee Syphilis Study** (1932–1972), where African American men with syphilis were deliberately left untreated without informed consent, even after penicillin became available.

Purpose:

To establish **basic ethical principles** for research involving human subjects and to guide regulations in the U.S. (and influence international ethics).

Core principles in the Belmont Report:

1. **Respect for Persons**
   1. Treat individuals as autonomous agents.
   2. Provide special protection for those with diminished autonomy (e.g., children, cognitively impaired).
   3. Requires *informed consent*.
2. **Beneficence**
   1. Maximize possible benefits.
   2. Minimize possible harms.
   3. Obligation to assess risk–benefit ratio in research.
3. **Justice**
   1. Fair distribution of the benefits and burdens of research.
   2. Avoid exploiting vulnerable groups.
   3. Ensure equitable subject selection.

Impact:

- These principles form the ethical backbone for **Institutional Review Boards (IRBs)**.

- They influenced the **Common Rule** in the U.S. and inspired global research ethics guidelines like the **Declaration of Helsinki**.

- Even outside research, the Belmont principles are applied in clinical bioethics discussions.

From the 1980s onward, **autonomy** became the dominant principle in most Western medical ethics

while paternalism became the exception rather than the rule.

- Medical ethics today

- Modern medical ethics uses the “**four-principle” approach** (autonomy, beneficence, non-maleficence, justice) from Beauchamp and Childress (1979).

- Paternalism still exists, especially in urgent situations (emergency care without consent) or in cultures that prioritize family decision-making over individual autonomy, **however**

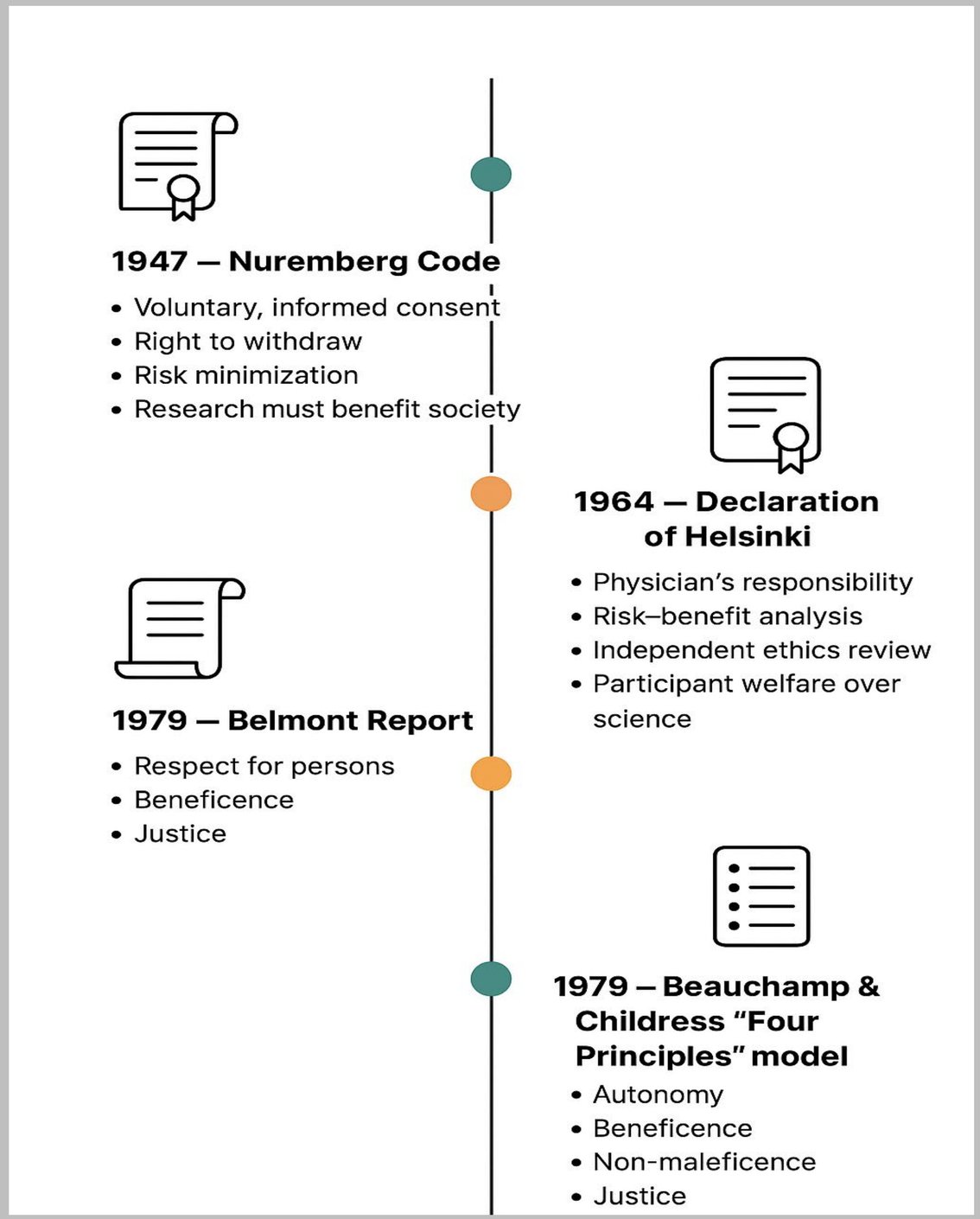
the default expectation in most health systems is **shared decision-making** and full informed consent.

1979 – Beauchamp & Childress “Four Principles” model

Expanded ethical thinking beyond research into **clinical practice**.

- Four principles:
  - Autonomy.
  - Beneficence.
  - Non-maleficence.
  - Justice.
- This model is now the **foundation of modern clinical bioethics** worldwide.

- **How we got to here, the timeline**



We starts with four core principles:

autonomy,
beneficence,
non-maleficence,
and justice.

Autonomy:

is about respecting a patient’s right to make decisions about their own care

Beneficence:

is the duty to help patients and promote their well-being

Non-maleficence:

is “do no harm,” which means avoiding interventions where harm outweighs benefit.

Justice:

involves fairness in distributing healthcare resources and treating patients equally

Ethical reasoning often requires balancing principles, context, and consequences, not just following rules.

reflective practice is important, that is where clinicians regularly examine their decisions, biases, and values, to improve ethical judgment. This is especially crucial in complex cases where there is no clear “right answer.”

informed consent: THIS IS A CRUCIAL and very relevant in clinical practice.

It’s more than a signature on a form.

True informed consent requires **capacity**, **adequate disclosure**, **understanding**, **voluntariness**, and **authorization**.

A patient must understand their diagnosis, the proposed treatment, alternatives, and the risks and benefits.

Communication is key—language, cultural factors, health literacy, and emotional state all affect understanding.

Confidentiality is another core area.

confidentiality is not absolute—it can be breached if there's a **serious risk to the patient or others**, such as imminent harm, child abuse, or certain infectious diseases.

The physician must always weigh the breach against potential benefits and harms.

End-of-life ethics is a major focus.

differentiate between **withholding treatment**, **withdrawing treatment**, and **assisted dying**.

Ethically, withholding or withdrawing life-sustaining treatment with patient consent is generally accepted, because it respects autonomy and avoids prolonging suffering. (advanced directives, and living wills, health-care proxy assignment are important considerations)

Active euthanasia is far more controversial and is handled differently depending on legal, cultural, and ethical frameworks.

In **research ethics**,

Principles include **respect for persons, beneficence, and justice**

which are embodied in the Belmont Report.

Patients in research must have voluntary participation, protection from harm, and fair selection.

emphasize equipoise: research is ethical only if there’s genuine uncertainty about which treatment is better.

emerging challenges:

genetics, reproductive technology, AI in diagnostics, resource scarcity, and global health ethics.

For example, in genetics, testing might reveal information not just about the patient but about family members.

Balancing autonomy, privacy, and potential harm is tricky.

AI raises questions about accountability, bias, and transparency.

cultural, legal, and religious considerations are very important for real-world clinical scenarios.

U.S.A VS. Jordan

A young woman in Jordan has severe depression with suicidal thoughts. She wants to start electroconvulsive therapy (ECT), but her family refuses due to cultural and religious beliefs, fearing stigma and “spiritual harm.” At the same time, the law requires family consent for certain treatments in minors or young adults.

Step one:

Identify stakeholders

*the patient
*her family
*the treating psychiatrist
*the hospital
*and potentially society (because mental health stigma can affect policy and community perception)

Step one:
Identify stakeholders—the patient, her family, the treating psychiatrist, the hospital, and potentially society (because mental health stigma can affect policy and community perception).

Step two:

Identify ethical principles

Autonomy

(patient wants treatment)

beneficence

(ECT may save her life)

non-maleficence

(ECT has risks, but withholding may cause harm),

justice

(fair treatment and access to care)

Cultural and religious values introduce an additional layer, affecting perceived harms and benefits.

Step two: **Identify ethical principles**—autonomy (patient wants treatment), beneficence (ECT may save her life), non-maleficence (ECT has risks, but withholding may cause harm), justice (fair treatment and access to care). Cultural and religious values introduce an additional layer, affecting perceived harms and benefits.

Step three:

Analyze the dilemma

conflict between:

respecting the patient's autonomy and the family's cultural/religious authority

Legally,

the family may have decision-making power, which could override autonomy depending on age and regulations.

Stress on:

analyzing **all sources of harm**: emotional, physical, spiritual, and societal.

Step three: **Analyze the dilemma**—there's a conflict between respecting the patient's autonomy and the family's cultural/religious authority. Legally, the family may have decision-making power, which could override autonomy depending on age and regulations. Stress on analyzing **all sources of harm**: emotional, physical, spiritual, and societal.

Step four: **Consider alternatives**

1- Enhancing communication with the family, e.g: involving a cultural mediator or, religious advisor to explain the medical necessity

2- Offering patient psychotherapy while waiting for consent

3- Seek legal consultation if the patient’s life is at imminent risk.

Step four: **Consider alternatives**—enhancing communication with the family, involving a cultural mediator or religious advisor to explain the medical necessity, offering psychotherapy while waiting for consent, or seeking legal consultation if the patient’s life is at imminent risk.

Step five:

Decide and justify

prioritize life-saving treatment >>

involve the family respectfully >>>

document all discussions >>>>

and **escalate ethically** if refusal endangers the patient.

Here, “reflective practice” is key:

the psychiatrist must examine personal biases, cultural assumptions, and potential legal repercussions before acting.

Step five: **Decide and justify**—
a **balanced, stepwise approach**: prioritize life-saving treatment, involve the family respectfully, document all discussions, and escalate ethically if refusal endangers the patient. Here, reflective practice is key: the psychiatrist must examine personal biases, cultural assumptions, and potential legal repercussions before acting.

Step six:

Documentation and reflection

careful recording/documentation of:

1-Reasoning

2-Patient preferences

3-Family discussions

4-Any relevant legal considerations

Reflective practice:
which means **debriefing** after the case to **learn** from the ethical tension and **improve** future decision-making.

What’s important here is that this is a model, a **process for ethically navigating conflicts** when medical, legal, cultural, and religious norms intersect.

This shows that:

principles can **guide** but **not dictate**.

Careful deliberation, empathy, and context-specific reasoning are central.

Step six: **Documentation and reflection**—
careful recording of reasoning, patient preferences, family discussions, and legal considerations.
Reflective practice also means debriefing after the case to learn from the ethical tension and improve future decision-making.
What's important here is that this is a model, a **process for ethically navigating conflicts** when medical, legal, cultural, and religious norms intersect. It shows how principles can guide but not dictate—careful deliberation, empathy, and context-specific reasoning are central.

Let us review what we did so far:

Step one:
Identify the stakeholders. Start by listing everyone affected—patients, family, healthcare team, society, and sometimes future generations.

Understanding who is involved clarifies responsibilities and possible harms.

Step two:

Clarify the ethical principles involved.
Ask which principles are at stake: autonomy, beneficence, non-maleficence, justice.

Sometimes principles conflict—this is normal.

Consider **cultural, religious, and legal norms** as contextual “guides” that may influence interpretation.

Step three:

Gather all relevant facts.

patient capacity
Medical facts
prognosis
treatment options
risks
benefits
social circumstances, and legal obligations.
avoiding assumptions ***fact-check everything

Step four:

Identify the core ethical dilemma. Clearly articulate the conflict. For example: “Respecting autonomy may cause harm” or “Family wishes conflict with patient consent.” Writing it down makes the tension explicit.

Step five:

Consider possible courses of action.

List every reasonable option, even those that seem extreme.
Be creativity here: partial treatments, mediation, delaying decisions for further information, or involving ethics committees.

Step six:

Weigh consequences and moral obligations.

For each option, ask:

who benefits?

Who is harmed?

Which principle is most strongly supported or violated?

Now let us move to the

final steps

Deliberate and make a decision.

Choose the action that best balances principles, minimizes harm, and respects the most stakeholders, while staying legally and culturally appropriate.

Ethical reasoning often leads to a **“best possible”** solution rather than a **perfect one**.

Document your reasoning

Record facts:

1-options

2-discussions

3-rationale for the chosen action

documentation protects patients, clinicians, and institutions, and supports reflective practice.

Implement the decision with care and communication: this means

Engage stakeholders
explain reasoning
address fears
ensure transparency

Ethics isn’t just abstract
it’s relational