

## [W 06] Bioethics: Ethics in Medical Research.

### [Sub titles]

#### 1. Ethical challenges in clinical trials.

##### Promo:

- Is the drug I am giving to the patient extremely needed ?
  - . Urgent, important, nice-to-have, Urgent and important.
  - . AI generated articles for medical usecases.
  - . monopoly of medical data in the UK.
  - . monopoly of information and non-ethical zonation.
  - . Ethical questionnaire about this from ChatGPT (3.5 , O-mini) VS DeepSeek. [Self evaluation].

- The article that won ignoble price in MRI research → talk to patients before MRI would change mammary gland expression ?

##### [CaseStudy 1] The Tuskegee Syphilis Study (1932-1972)

[What Happened?] US public health service studied untreated syphilis in 600 black men without informed consent.

- participants were denied treatment even after penicillin became the cure in the 1940s.

##### [Ethical issue]

- violation of **informed consent**, and **beneficence**.
- **Systemic racism** and **exploitation** of vulnerable population.

##### [Lesson learnt]

- lead to the modern ethical guidelines (**Belmont Report**) emphasizing autonomy and justice.

##### [CaseStudy 2]

- Injecting Ethiopian Jews to make them infertile by Zionist regimen.

#### 2. Genomic and Biotechnological research.

- Phenotype vs genotype story.
- Genome editing.
- Spatial-omics.
- DNA imaging.
- Genomic therapy → curing down-syndrom.

##### [CaseStudy 3] Designer babies by He Jiankui (CRISPR-babies in 2018)

##### [Ethical issue]

##### Germline editing:

Risk of unintended genetic alterations in the future generation.

Lack of global consensus of human genome modifications.

#### 3. Pandemics, Public Health, and Policy Experiments.

- Was Covid a planned pandemics ? What are the evidences for-and-against this theme ?
- Consensus AI → answer this question ?
- The most cited paper for Covid-19 was retracted.
- Number of retracted papers with Covid in their title and abstract using proximity search and Open-Alex.
- Most professors mutate after some years in academia into someone they used to resent one day.
- Maxplanck scandal 2025.

##### [CaseStudy 4] COVID-19 vaccine trials and inequitable distribution [2020-2022]

[Ethical issue] Emergency Use Authorization (EUA) balancing public health urgency with safety.

Global inequity in resource distribution.

- Türkiye deliberately stopped covid-vaccines' in the Kurdish areas [passive genocide] → show heatmaps.

[Lesson learnt]

COVAX framework to promote equitable vaccine access.

#### 4. Community & Patient Partnerships in Research.

[CaseStudy 5] The Navajo Nation Banned Genetic Research after past exploitation. Misuse of blood samples. [2002-present]

[Ethical issue]

Historical distrust due to **biocolonialism** and lack of community consent.

Importance of cultural respect and shared decision-making.

[Lesson learnt] Successful research requires building trust and prioritizing community priorities.

- US government Banned Covid research in Middle east.

- Türkiye deliberately stopped covid-vaccines' in the Kurdish areas [passive genocide] → show heatmaps.

- US implanted a Covid patient in Qum/Iran.

- [CaseStudy 5] 2023 Germany started allowing Marijuana ~30 g/day.

[Ethical issue] ~50 g/day is lethal.

[Lesson learnt] always prioritize public health over financial benefits.

- [CaseStudy 6] Carfend and Fluoride in drinking water → **sublime** populations.

[Ethical issue] causing population wide hormonal change.

[Lesson learnt]

- Yet to be learnt.

[Lecture plans]

Start by talking about the incentives of why humans started doing medicine ?

- How pharaohs perceived medicine ?

- idea of immortality:

وتتخذون مصانع لعلكم تخلدون

وقال فرعون ائتوني بكل ساحر عليم

- Chinese perspective of having a house doctor.

- German Hausarzt perspective.

- British mentality.

- Middle-eastern perspective.

- Medical ethics has been related to three main topics:

1. **Topic-1:** Religion.

- Example that blood transfusion is forbidden.
- Circumcision in Judaism is a must, they found out about haemophilia.

- **Topic-2:**

- **Topic-3:**

- 

- Which branches of Medicine do we consider medical sciences ?

1. General medicine.
2. Pharmacology
3. Veterinary medicine
4. Dentistry
5. Community medicine

- **Science vs pseudoscience in medicine:**

Purple toothpaste removes yellow stain.

- Backed by physics, but still fake.

DNA has signals that can receive signals from universe.

- Theory of scalar waves by german pseudoscientist Konstantin Meyl.

**Major advancements in medical sciences involve:**

- Miniaturization of medical devices.
- Automation of medical procedures.
- Enhancing performance based on (sensitivity, specificity and accuracy).
- Negative control leads to specificity.
- Multimodal medical procedures.