

MODERATOR:

Dana Borja

CHAIR:

Valentina González

CO-CHAIR:

Paula Pérez

UNDER: María José Galíndez



World Health Organization

Topic A: “Ethical Repercussions of Human Genome Editing, and the Changes derived from this Shift in the Health Systems.”



Welcoming letter:

Dear delegates:

It is with great pleasure to welcome you to the CFMUNX. As we prepare you for the prestigious event, we would like to extend our warmest greetings and heartfelt gratitude for your participation.

Within this background paper, we have endeavoured to provide you with a comprehensive overview of the model's objectives, theme, and featured topics. We strongly encourage you to familiarize yourself with the content, as it will serve as a helpful reference during the conference proceedings.

As esteemed, we value your contributions and look forward to hearing your unique perspectives and efficient solutions.

We encourage you to actively participate in the various sessions and engage in thought-provoking discussions.



Together, we can create a conducive atmosphere of meaningful dialogue, innovative thinking, and collaborative action.

Once again, we extend our sincerest welcome to you. Your presence at the CFMUN is highly valued, and we are confident that your contributions will make this event a resounding success.

We hope that this model serves as a prominent platform for you to share your knowledge, broaden your horizons, and leave with lasting memories.

On behalf of the organizing committee, we wish you a memorable and rewarding experience at the CFMUN. May this be the beginning of partnerships, impactful collaborations, and a pathway to a brighter future.

Warm regards,
Chair of WHO





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I. Committee Background

The World Health Organization, founded in 1948, is the United Nations agency in charge of advancing universal health care to an international level.

They organize and lead the global response to health emergencies, and encourage leading healthier lives, from prenatal care through old age. With the help of science-based policies and programs, Triple Billion targets set forth an ambitious strategy for the globe to achieve universally good health.

Topics discussed include adult mortality, alcohol control policies, ambient air pollution, anemia in women and children, anti-dementia medication and care products availability, assistive technology indicators, awareness and friendliness and more.

(World Health Organization, n.d.).

II. Introduction to the Topic

Genome editing is a method for making specific changes to the DNA of a cell or organism. It can be used to add, remove or alter DNA in the genome. Human genome editing technologies can be used on somatic cells (non-heritable), germ line cells (not for reproduction), and germ line cells (for reproduction).

Application of somatic human genome editing has already been undertaken, including in vivo editing, to address HIV and sickle-cell disease, for example. Although, somatic human genome editing is well established and acceptable for treatments in some scientifically advanced countries with regulations in place, challenges remain. These include the need to develop inclusive genome editing innovations that take note of the diversity of the human population and human experience.

III. Evolution of the Topic

In December 2018, WHO established a global multidisciplinary Expert Advisory Committee to examine the scientific, ethical, social, and legal challenges associated with human genome editing (somatic, that is, non-heritable; germ line, involving in vitro studies on early embryos, gametes or their precursors; and heritable, where embryos subject to genome editing are used to establish pregnancies and create individuals who could pass on the edit to their offspring).

The Committee consulted widely and built on existing initiatives to develop a governance framework and recommendations on the governance and oversight of human genome editing.



In July 2021, the Committee published a governance framework for human genome editing and recommendations on human genome editing.

Additional outputs of the Committee include a global registry on human genome editing, a policy statement by the Director-General on germ line human genome editing and the reports of the Committee's work.

IV. Relevant Events

A. Panorama

- **Germ line Editing:** Modifying the DNA of human embryos or germ line cells have sparked intense ethical debates. Concerns about unintended consequences, the creation of designer babies, and unknown long-term effects are paramount.
- **Somatic Cell Editing:** Editing the DNA of non-reproductive cells, such as those in adults, are generally seen as less ethically fraught. It can be used to treat genetic disorders or cancer, but ethical concerns still exist.
- **Equity and Access:** There are concerns that genome editing technologies may exacerbate existing social and economic disparities if they are not accessible to all. Ensuring equitable access is a critical ethical consideration.

B. Points of view

- **Informed Consent and Autonomy:** Humanitarian organizations often stress the importance of informed consent and individual autonomy. They advocate for ensuring that individuals understand the potential risks and benefits of genetic interventions before consenting to any genome editing procedures.
- **Equity and Access:** NGOs are likely to emphasize the need for equitable access to genetic therapies. There are concerns that genome editing technologies could exacerbate existing health inequalities if they are not accessible to all populations, regardless of socio-economic status.

- **Unintended Consequences and Safety:** Humanitarian and ethical concerns are often raised regarding the potential for unintended consequences and the long-term safety of gene-editing technologies. Organizations may advocate for rigorous research and testing to minimize risks and unknown side effects.
- **Germ line Editing and Future Generations:** NGOs may call for careful consideration of the implications for future generations and the potential for unintended consequences that could affect the gene pool.

V. UN and External Actions

A) UN Actions

In December 2018, WHO established a global, multidisciplinary Expert Advisory Committee to examine the scientific, ethical, social and legal challenges associated with human genome editing (somatic, that is, non-heritable; germ line, involving in vitro studies on early embryos, gametes or their precursors; and heritable, where embryos subject to genome editing, are used to establish pregnancies and create individuals who could pass on the edit to their offspring).

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B) External actions:

a. **International Guidelines:** The international community has developed guidelines and agreements to govern human genome editing research.

The World Health Organization (WHO) and UNESCO have issued recommendations.

b. **National Regulations:** Many countries have established their own regulations regarding human genome editing, often under the umbrella of bioethics laws and guidelines.

VI. Conclusion

Human genome editing, represents a powerful and promising technology with the potential to address various medical, agricultural, and ethical challenges. However, it also raises profound ethical, social, and regulatory questions that require careful consideration and ongoing dialogue.

Balancing the benefits and risks of genome editing while ensuring equitable access is crucial for harnessing the full potential of this technology while safeguarding the well-being of individuals and society as a whole.



VII. Committee Focus

Considering this situation, it is urgent to investigate more about the relation between healthy treatments, ethical consequences and human genome editing.

Delegates should come to solutions to tackle the issue of treatment insufficiency for healthcare institutions to have proper ethical alternative treatments in order to decrease sickness.

Solutions regarding treating health problems should also be taken into account.

When considering the possible solutions to the committee's topic, the following points must be considered:

1. How can we immediately establish ethical guidelines for human genome editing to guide current research and applications?

2. What strategies are needed to update existing ethical frameworks to address emerging challenges in genome editing technologies?

3. What mechanisms can be established for ongoing public discourse and engagement to involve diverse perspectives in shaping long-term ethical guidelines for human genome editing, reflecting evolving societal values and opinions?

4. How can healthcare professionals and researchers collaborate to develop educational programs aimed at raising awareness and fostering ethical considerations among the general public regarding the topic?

5. What long-term global governance structures can be developed to oversee the ethical implications of human genome editing across borders?



VII. Participation List

1. Islamic Republic of Afghanistan
2. The Commonwealth of Australia
3. People's Republic of Bangladesh
4. People's Republic of China
5. Dominion of Canada
6. Republic of Croatia
7. Republic of Ecuador
8. Arab Republic of Egypt
9. Republic of Fiji
10. French Republic
11. Federal Republic of Germany
12. Hungary
13. Republic of India
14. Republic of Indonesia
15. Jamaica
16. Democratic People's Republic of Korea
17. United Mexican States
18. Federal Republic of Nigeria
19. Kingdom of Saudi Arabia
20. Republic of Turkey
21. Russian Federation
22. United Kingdom of Great Britain and Northern Ireland
23. United States of America
24. Republic of Zambia

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