

# WORLD HEALTH ORGANISATION

## **Assuring women's health by globally promoting safe abortion procedures in cases of involuntary pregnancies arising from sexual violence**

### 1) Introduction

This research paper ought to speak to the global burden of unsafe abortion. The cost is mainly carried by those who are the most vulnerable and least able to access safe services, millions of poor women, adolescent girls, rural women peasants and their families bear the lasting consequences of this pandemic issue. It is a cost that gets swept up in the debate about abortions; a debate that sometimes misses the day-to-day impact unsafe abortion has on women's lives, especially those living in the developing world. They are barred from access to safe abortion services due to a combination of social, economic, religious, and policy factors. An estimated 22 million abortions continue to be unsafe each year, resulting in the death of an estimated 47 000 women. Until unsafe abortion and its consequences are eliminated, complications from unsafe abortion will remain a major cause of maternal mortality and morbidity.

### 2) Definition of Key Terms

unsafe abortion - a procedure for terminating an unintended pregnancy, carried out either by persons lacking the necessary skills or in an environment that does not conform to minimal medical standards, or both<sup>1</sup>

sexual violence - a sexual act committed against someone without that person's freely given consent<sup>2</sup>

### 3) General Overview

#### Gender inequality

Gender inequality restricts women's sexual and reproductive health and rights. The world's poorest young women and girls are disproportionately affected. Two-thirds of the 1.4 billion living in extreme poverty are women.

Without access to their basic human rights these women lack the ability to have control over their own bodies and ultimately, their future. They aren't able to protect themselves from STIs, unplanned pregnancies or gender-based violence.

Poor sexual and reproductive health outcomes represent one-third of the total global burden of disease for women aged 15-44 years. Unsafe sex is a major risk factor for death and disability in low and middle-income countries. Globally, HIV is the leading cause of death among women of reproductive age

#### Sexual violence

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<sup>1</sup> WHO's unsafe abortion definition, <http://www.who.int/bulletin/volumes/92/3/14-136333/en/>, [10.01.17]

<sup>2</sup> <https://www.cdc.gov/violenceprevention/sexualviolence/definitions.html>

Sexual violence occurs everywhere throughout the world. Although in most countries there has been little research conducted on the problem, available data suggest that in some countries nearly one in four women may experience sexual violence by an intimate partner, what's more, up to one-third of adolescent girls report their first sexual experience as being forced. Sexual violence often results in unwanted pregnancies. Unwanted pregnancies resulting from sexual violence can lead to unsafe abortions and avoidable maternal deaths when access to safe abortion is denied and criminalized. Criminal laws on abortion that restrict access to safe abortion care in cases of sexual violence must be amended, as recommended by the UN Special Rapporteur on the right to health and United Nations human rights treaty monitoring bodies.<sup>3</sup>

### Correlations

The strong correlation between restrictive abortion policies and the maternal mortality ratio reflects the positive correlation between levels of development and the availability and quality of maternal health care services, since developing usually are to have both weaker healthcare systems (especially for maternal health and obstetric care) and more restrictive abortion policies.

Simply put, access to safe abortion improves women's health, and vice versa, as documented in Romania during the regime of President Nicolae Ceausescu. The availability of modern contraception can reduce but never eliminate the need for abortion. Direct costs of treating abortion complications burden impoverished health care system, draining already struggling economies. In 2006, it was estimated that \$680 million was spent treating serious consequences of unsafe abortion<sup>2</sup>. An additional \$370 million would be required to fully meet the unmet need for treatment of complications from unsafe abortion<sup>2</sup>

### Ways to solve this

Access to safe, legal abortion is a fundamental right of women, irrespective of where they live. And yet according to WHO, every eight minutes a woman dies of complications arising from unsafe abortions.<sup>4</sup> Even so, this ever so pressing issue is not something we could not prevent. Furthermore, it all begins with educating the civilians, as the majority of women living in the developing world are often uninformed about the possibility of (safe), legal abortion. For example, in an experiment conducted in Nepal only 44% women were aware that abortion was legal in their country.<sup>5</sup> What's more, is providing good sexual education that would spread information about prevention of unintended pregnancy through use of effective contraception, including emergency contraception and where to find one. The effect of national contraceptive programs on reducing the rate of abortion is well documented. From the seven investigated countries (Bulgaria, Kazakhstan, Kyrgyzstan, Switzerland, Tunisia, Turkey, and Uzbekistan), abortion rates fell as use of modern contraception rose. Moreover, needless to say authorization of safe, legal abortion remains indispensable step towards ending this pandemic problem. By investing in abortion safety and availability, governments throughout the world can save the lives of tens of thousands of women every year.

### Beyond legalization

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<sup>3</sup> [file:///Users/anastasia/Downloads/SVUPYE13%20\(1\).pdf](file:///Users/anastasia/Downloads/SVUPYE13%20(1).pdf)

<sup>4</sup> <http://www.iosrjournals.org/iosr-jdms/papers/Vol14-issue2/Version-6/H014263639.pdf>

<sup>5</sup> <https://www.ncbi.nlm.nih.gov/pubmed/23574112>

Broadly speaking, where there is no legal restriction, abortion services are likely to be safe. In these settings, the abortion is performed in a regulated medical setting and the providers are properly trained. In contrast, where abortion laws are highly restrictive, women turn to clandestine providers with a high risk of incurring a serious or life-threatening complication. However, legalization of abortion on request is a necessary but insufficient step toward improving women's health; in some countries, such as India, where abortion has been legal for decades, access to competent care remains restricted because of other barriers. In spite of its legalization of abortion in 1971, most of the abortions are done by untrained personnel. Factors inhibiting the use of safe abortion and hence being a hurdle in achieving the desired maternal health are lack of privacy, confidentiality, poor access and discouraging attitudes of healthcare providers. Therefore legalization of abortion was a necessary but insufficient step towards improving women's health.<sup>6</sup>

To conclude, illegal abortions are not necessarily unsafe, legal abortions are not necessarily safe, and clandestine abortions occur in countries where abortion is legal and free of charge. Clandestine providers may be skilled in abortion provision and provide high quality abortion care in some cases, while government certified providers may offer poor service and quality of care so that women turn to untrained abortion providers who may be more respectful of confidentiality and privacy. In regions where abortion is highly restricted, the private sector plays an important role in provision of safe abortions for women who can afford it. Although costly and therefore only accessible to women with the means to pay, clandestine abortion providers (such as well-trained doctors and midwives) may offer a safe abortion service, including post-abortion care if there should be complications.<sup>7</sup>

#### Stigma around it

Whether legal or illegal, induced abortion is usually stigmatized and frequently censored by political, religious, or other leaders. Hence, under-reporting is routine even in countries where abortion is legally available. The use of varying terms, such as induced miscarriage, menstrual regulation, mini-abortion, and regulation of a delayed or suspended menstruation further compounds the problem of producing reliable and comparable estimates of the prevalence of unsafe abortion

Furthermore, stigma impairs health, both directly through harm to wellbeing and indirectly by hindering prompt access to medical care. Stigma related to abortion particularly affects adolescents and unmarried women because of their inexperience and few economic resources. Social sanctions against sexual activity are especially problematic for unmarried women.

The underlying causes of morbidity and mortality from unsafe abortion today are not blood loss and infection but, rather, apathy and disdain toward women.

#### Health hazards

Typical health hazards include:

- incomplete abortion (failure to remove or expel all of the pregnancy tissue from the uterus)
- hemorrhage (heavy bleeding)

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<sup>6</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709326/>

<sup>7</sup> <http://en.calameo.com/read/0043737731fcef0583fd3>

- infection
- uterine perforation (caused when the uterus is pierced by a sharp object)
- damage to the genital tract and internal organs by inserting dangerous objects such as sticks, knitting needles, or broken glass into the vagina or anus.<sup>8</sup>

#### Access to treatment for abortion complications

Health-care providers are obligated to provide life-saving medical care to any woman who suffers abortion related complications, including treatment of complications from unsafe abortion, regardless of the legal grounds for abortion. However, in some cases, treatment of abortion complications is administered only on the condition that the woman provides information about the people who agreed to perform the illegal abortion.

The practice of extracting confessions from women seeking emergency medical care as a result of illegal abortion puts women's lives at risk. The legal requirements for doctors and other health-care personnel to report cases of women who have undergone abortion, delays care and increases the risks to women's health and lives. UN human rights standards call on countries to provide immediate and unconditional treatment to anyone seeking emergency medical care<sup>9</sup>

#### 4) Major Parties Involved

##### WHO

During the 1990s WHO formulated managerial guidelines for improving the quality and availability of abortion and care for its complications as part of a primary health care system as well as guidelines for planning the location and content of emergency abortion care at each level of the health care system. Because of the sparse guidance relating to abortion WHO had issued up to that point, these technical and managerial guidelines were an important advance.<sup>10</sup>

##### IPPF

IPPF has created the Safe Abortion Action Fund.<sup>11</sup> 'The first phase supported 50 projects and outcomes included the training of 5,500 health providers and 7,500 advocates, and the provision of direct services to 300,000 women.'

##### Member states

Increasingly, private foundations and donor governments, including the UK, Netherlands, Sweden, Norway, Denmark, and Finland, have funded activities to advance access to safe abortion.

#### 5) Timeline of Key Events and Previous Attempts to Resolve the Issue

The public health rationale to address unsafe abortion was first drawn to attention by the World Health Assembly four decades ago. In 1994, the Program of Action of the Interna-

<sup>8</sup> <http://www.who.int/mediacentre/factsheets/fs388/en/>

<sup>9</sup> <http://www.who.int/mediacentre/factsheets/fs388/en/>

<sup>10</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3673261/>

<sup>11</sup> <http://www.ippf.org/our-approach/programmes/Safe-Abortion-Action-Fund>

tional Conference on Population and Development stated, “In circumstances where abortion is not against the law, such abortion should be safe.”

The Report of the Fourth World Conference on Women, held in Beijing in 1995, noted “unsafe abortions threaten the lives of a large number of women, representing a grave public health problem as it is primarily the poorest and youngest who take the highest risk”.<sup>12</sup>

At the Special Session of the UN General Assembly in June, 1999, governments agreed that “in circumstances where abortion is not against the law, health systems should train and equip health-service providers and should take other measures to ensure that such abortion is safe and accessible”.

Among the most important actions to reduce deaths and injuries from unsafe abortion is liberalizing abortion laws, which 24 countries from all regions of the world did, to arraying degrees, between 1995 and 2008.

6) Appendix/Appendices

WHO document on (un)safe abortions

[http://apps.who.int/iris/bitstream/10665/70914/1/9789241548434\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/70914/1/9789241548434_eng.pdf)

IPPF document on (un)safe abortions:

[http://www.ippf.org/sites/default/files/access\\_to\\_safe\\_abortion.pdf](http://www.ippf.org/sites/default/files/access_to_safe_abortion.pdf)

UN document on Abortion Policies

<http://www.un.org/en/development/desa/population/publications/pdf/policy/AbortionPoliciesReproductiveHealth.pdf>

SRI on Decriminalization of Abortion

[http://sexualrightsinitiative.com/wp-content/uploads/SRI-Decriminalization-of-Abortion-Position-Paper\\_2013\\_Final.pdf](http://sexualrightsinitiative.com/wp-content/uploads/SRI-Decriminalization-of-Abortion-Position-Paper_2013_Final.pdf)

Reproductive Rights on Sexual Violence and Abortion Laws

[https://www.reproductiverights.org/sites/crr.civicactions.net/files/documents/crr\\_AbortionLaws\\_SexualViolence\\_8.12.13.pdf](https://www.reproductiverights.org/sites/crr.civicactions.net/files/documents/crr_AbortionLaws_SexualViolence_8.12.13.pdf)

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<sup>12</sup> [http://www.who.int/reproductivehealth/publications/general/lancet\\_4.pdf](http://www.who.int/reproductivehealth/publications/general/lancet_4.pdf)

## **Creating universal morality guidelines for research in the field of genetic modification of human embryos.**

In the recent past there has been a boom in genomic technologies. However, it has also contemplated a number of ethical questions. In this research paper I will firstly focus on the scientific approach to this topic and afterwards discuss the possible ethical problems while emphasizing the need to provide universal morality guideline that will apply not only to state-funded research, but also to private companies.

### **Mitochondrial transplantation**

Mitochondria, the organelles that produce ATP, are crucial to the cells ability to make DNA and RNA and cover about 90 % of the function of the cell. It is known that mutations in the mitochondria are about ten times more often than in the nuclear genome. Mitochondrial DNA makes its own genes which cannot be replaced by the genes made by the nucleus. Mitochondria are inherited only from the maternal side (it is still not completely known how this process works, the egg probably has proteins to kill the unknown mitochondria of the sperm).

Mitochondrial diseases are not curable after they are developed and they can have a variety of symptoms, such a stunted growth, an increased risk of infection, diabetes, disease of the heart, liver, and kidneys, visual and auditory deficits, and loss of coordination and muscle weakness, various neurological problems, and seizures. Since there is no cure for these diseases women suffering from mitochondrial disease have the choice to either adopt or use a different womens egg.

The technology of mitochondrial transplantation consists of the extraction of DNA from the donor egg and the insertion of fertilized DNA from the mother.

Eventhough this technique sounds perfect and unproblematic it has aroused a number of concerns particularly after the UK parliament voted in favor for the mitochondrial donation procedure. One of the major concerns is the safety of this procedure. As it has been tested only on mice and monkeys we still do not know all the consequences it has in a human embryo. It is possible that in the early human development mitochondrial DNA (mtDNA) interacts with the nuclear DNA, which could be a problem for example if the mtDNA had a different haplotype. However, this could be prevented by haplotype testing, although there could be other regulations between the two types of DNA we do not know about.

Apart from the scientific reasons there are a number of ethical reasons as well. The child really is a product of three parents as the mtDNA interacts with the nuclear DNA, which could lead to problems with the identity of the child. Eventhough mtDNA does not result in any phenotype traits children without mitochondrial disease are different than those that would be born with sick mitochondria, which could lead to religion problems as we are creating a different child that would lead a different life, than the one affected by mitochondrial disease.

Although we could think that it is up to the parents to decide if they want the procedure, it is not completely true. Changing the genome has an impact on the society as well. Since we are eradicating some mtDNA we are decreasing the gene pool which could have an effect on the evolution of our society. Before the voting in the UK there has been a letter written by 55 members of the Italian parliament stating: "The creation of such embryos could have uncontrollable and unforeseeable consequences, affecting future generations, and modifying genetic heritage in an irreversible way, inevitably affecting the human species as a whole. It is a dangerous intervention involving

genetic engineering, which affects the whole of humanity, and cannot possibly be contained within the confines of the UK.”

In conclusion this topic is very problematic as it affects the whole society, but there is no other cure to mitochondrial disease. It is possible to reason that since gene therapy is used mitochondrial donation could be as well but there is a definite need for further discussion.

## CRISPR/Cas9

CRISPR, or also Clustered Regularly Interspaced Short Palindromic repeats, is a system that uses the cells reproductive mechanism to knock-out or add a DNA sequence. It is revolutionary since it is easy and quick to target a specific gene. CRISPR/Cas9 is used by bacteria to fight against viral infections. CRISPR contains a specific sequence that binds to the viral DNA and Cas9 cuts the DNA thus destroying it. CRISPR can be modified to target a specific sequence in a human genome. For more information: (<https://www.youtube.com/watch?v=TdBAHexVYzc>).

Compared to the previous techniques CRISPR is much more specific, faster and cost-effective. It has been tested in China on human embryos, which were made infertile by dispermatric fertilization. It has been used to successfully cure thalassemia beta, which is an autosomatic recessive metabolic disorder in some embryos, but has shown side-effects, when the enzyme modified other parts of the genome apart from the wanted beta chain of hemoglobin.

## Possible problems of genetic engineering

One of the main problems is the uncertainty of what a gene does in the early embryonic development. Even though we know almost exactly what function does a gene have in a fully developed individual, there are genes that regulate the development of the embryo, which we have still not exactly specified, and by deleting a gene that causes a defect in fetus we will maybe cure the disease but we could also make a severe developmental defect, because the gene could interact in the development. As one of the genes that may have this pleiotropic function we can state BMP4, which can induce apoptosis in the early embryonic development but induces epidermal differentiation in adults.

Another problem is the definition of what a bad trait exactly is. It is known that genes for sickle cell anemia cause severe oxygen insufficiency, however when heterozygous for this gene, it brings advantages while fighting the Protozoa Plasmodium, which causes malaria. If we delete the gene for sickle cell anemia we will decrease the number of heterozygotes and by that the resistance to malaria.

Probably the biggest concern the general public has is the possibility of the creation of designer babies. Not only we do not necessarily know which trait is more preferable than the others as the podminky can change. Moreover, people are scared of people being able to play God and choose exact traits of their babies. There is a slippery slope from curing diseases to changing the traits of our children even by a little bit. For example are genes that prone children for obesity or baldness so important we can change them as well? Where would we draw the line for what diseases can be modified and which cannot. And how will we stop illegal making of these babies once the technology has been made?

On the other hand there are also plenty advantages of research on embryos. For example we are still not sure about how the early development works and what genes play crucial roles and ge-

netic modification could undoubtedly save children lives with unviable conditions, such as severe immunodeficiencies.

UNESCO member States adopted the Universal Declaration on Bioethics and Human Rights in 2005 to deal with ethical issues raised by rapid changes in medicine, life sciences and technology. It states lists the human genome as part of the heritage of humanity, outlining rules that need to be observed to respect human dignity, human rights and fundamental freedoms. However, this definition is vague and needs to be modernized and specified.

For more reading:

<https://www.youtube.com/watch?v=TdBAHexVYzc>

<http://www.un.org/apps/news/story.asp?NewsID=52172#.WJEEABT306g>

<http://10e.devbio.com/article.php?id=172>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2690208/>

<http://sage.buckinstitute.org/ethical-implications-of-human-genetic-engineering-2/>