

# Chapter 4

## Featuring Healthcare, Environment, and Human Rights: Applications of Artificial Intelligence in the Health Domain

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### ABSTRACT

*The right to the best possible level of physical and mental health is protected by a number of international legal instruments, such as the International Covenant on Economic, Social, and Cultural Rights. Both liberties and entitlements are included in this right and this includes the protection against torture and against non-consensual medical treatment or experimentation, which is especially important for people with disabilities. The entitlement is the freedom to obtain first-rate medical treatment without encountering prejudice. A human rights-based perspective on health requires nations to set up health systems that respect human rights and are efficient, gender-transforming, integrated, and accountable. It also urges the adoption of public health initiatives targeted at enhancing the fundamental factors that influence health, such access to hygienic conditions and clean water. This chapter deeply dives in the healthcare and human rights perspectives with artificial intelligence applications.*

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## 1. INTRODUCTION AND BACKGROUND

All the people should be able to get the essential medical treatment whenever and wherever they need it, without having to worry about their finances, according to the concept of universal access to health services (Basulo-Ribeiro & Teixeira, 2024). Nobody should die or become ill because they are too poor to pay for necessary medical care (El Zein et al., 2024; Costa, 2024; Ray et al., 2024; Dinesh Arokia Raj et al., 2024). So, achieving good health is closely related to achieving other fundamental human rights including having access to clean water, proper sanitation, enough food, decent housing, education, and safe working conditions (Yue & Shyu, 2024) (Mithas et al., 2022) (Ivanov et al., 2019). The right to health also includes the freedom of individuals to make decisions about their bodies and health, including having access to services and information related to sexual and reproductive health without facing violence or discrimination (Javaid et al., 2022; Fraga-Lamas et al., 2021). In the modern global context, the interdependence of healthcare, the environment, and human rights creates a complex web of opportunities and difficulties (Felsberger et al., 2022) (Rath et al., 2024). Even while medical progress has led to notable gains in illness prevention, diagnosis, and treatment, human rights abuses and environmental degradation nevertheless have a negative impact on public health outcomes globally (Asadollahi-Yazdi et al., 2020; Meyendorf et al., 2023). Within this framework, the advent of Artificial Intelligence (AI) technology presents unparalleled potential to transform healthcare provision, reduce environmental hazards, and preserve fundamental human rights (Zhong et al., 2017) (Angelopoulos et al., 2020). With utilizing AI-driven technologies, data-driven insights may be used to solve important healthcare concerns and promote fair access to health services that have an influence on the environment and are ecologically sustainable (Lu et al., 2020).

Everyone has the right to privacy, decency, and respect; they shouldn't have to endure forced exams, medical experiments, or treatment without giving their informed permission (Chander et al., 2022). All people possess some inalienable rights only by virtue of being human (Kasowaki & Ahmet, 2024). These rights are independent of nationality, ethnicity, religion, culture, or socioeconomic standing. The only way people can live dignified lives is by exercising our rights without limitations (Sima et al., 2020). Possibly the most vital and related of all our rights is the ability to receive healthcare. Because human life is so fleeting, it is imperative that this right be protected as a matter of public welfare (Tseng et al., 2021). The ensuring that the most marginalized members of society to live dignified lives is contingent upon universal healthcare (Anastasi et al., 2021).

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