

# INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS



Open Access, Refereed Journal Multi Disciplinary  
Peer Reviewed

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# **ASSISTIVE TECHNOLOGY, DIGITAL HEALTH AND REPRODUCTIVE RIGHTS OF WOMEN WITH DISABILITIES: A HUMAN RIGHTS PERSPECTIVE**

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## **ABSTRACT**

Women with disability are doubly marginalised because they are excluded by both their gender and disability. New digital health technologies and assistive tools could help address these structural exclusions, but have yet to be fully realized. This paper conducts a systematic analysis of the interplay between AT, digital health and reproductive rights in the framework of international human rights law. The paper, using the framework provided by the United Nations Convention on the Rights of Persons with Disabilities (CRPD), World Health Organisation (WHO) guidelines and the Committee on the Elimination of Discrimination Against Women (CEDAW), critically assesses the legislation and regulations in India, namely the Rights of Persons with Disabilities Act, 2016, the Telemedicine Practice Guidelines, 2020 and the Digital Personal Data Protection Act, 2023. It also compares itself with standards in place in the United Kingdom, European Union and by WHO's Digital Health strategy worldwide. The paper suggests that the current structure is, in theory, ambitious in its legal provisions but has significant gaps in its enforcement provisions which result in systemic violations for the reproductive rights of disabled women, and the disabled women who live in a rural context. It ends with a series of concrete legislative, regulatory and institutional recommendations firmly supported by the human rights principle of universal accessibility.

**Keywords:** Reproductive rights, disability, assistive technology, digital health, telemedicine, accessibility.

## **I. INTRODUCTION**

Reproductive rights are fundamental rights of a human. They include the right to birth spacing, the right to reproductive health services and the right to sexual autonomy without being coerced, violated or discriminated against, and are internationally recognised under a network of multilateral instruments, including the Convention on the Elimination of All Forms of

Discrimination Against Women (CEDAW)<sup>1</sup> and the International Conference on Population and Development Programme of Action (ICPD POA) 1994. These are not rights that are to be desired. They are commitments that they impose on States. However, for the women with disabilities these rights are largely abstract and far from being realized. Disabled women have been historically denied information about their reproductive capacity, subjected to forced sterilisation, and excluded from reproductive health services which the State has committed to offer. There is much that medical professionals have ignored them, and they have been seen as an implicit disqualification from reproductive agency.<sup>2</sup> Digital health technologies have helped with some of these corrections, in a limited way, in the twenty first century. Telemedicine platforms, mobile health (mHealth) applications, artificial intelligence-based diagnostic tools, screen-reader compatible health portals, and hearing compatible videoconferencing systems represent great potential for increasing the availability of reproductive healthcare services to women for whom traditional clinical services are not accessible due to disability, geographic, or socioeconomic barriers. In principle, these tools can enable a woman with a visual impairment to access family planning counselling in private from her own home in rural Bihar, or enable a deaf woman in Bengaluru to access obstetric guidance through a sign-language enabled video consultation. However, this is only a promise and not a performance.

## **II. CONCEPTUAL FRAMEWORK: DISABILITY, REPRODUCTIVE RIGHTS, AND TECHNOLOGY**

### **A. The Social Model of Disability**

Today's prevailing model of law and human rights is the social model of disability. This model is based on the premise that disability is not a part of the person. It is a result of a society that is intolerant towards diversity in humans. Barriers, not impairments, disable people.<sup>3</sup> The UN General Assembly's CRPD (2006) is founded strictly on this social model.<sup>4</sup> Persons with disabilities are defined in the "CRPD as those who have long-term physical, mental, intellectual or sensory impairments which may hinder their full and effective participation in society, in

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<sup>1</sup> "Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), adopted 18 December 1979, 1249 UNTS 13, entered into force 3 September 1981, Art. 12."

<sup>2</sup> WHO, World Report on Disability (Geneva: World Health Organisation, 2011) 60–61; UN Special Rapporteur on the Rights of Persons with Disabilities, Report on Women and Girls with Disabilities, UN Doc. A/HRC/34/58 (2017), paras. 42–48.

<sup>3</sup> "Michael Oliver, *The Politics of Disablement* (Macmillan, 1990); Colin Barnes, 'Understanding the Social Model of Disability' in Nick Watson, Alan Roulstone and Carol Thomas (eds), *Routledge Handbook of Disability Studies* (Routledge, 2012)."

<sup>4</sup> Convention on the Rights of Persons with Disabilities (CRPD), adopted 13 December 2006, 2515 UNTS 3, entered into force 3 May 2008, Art. 1. As of 2024, 186 States have ratified the CRPD.

interaction with various barriers”. This is significant for digital health because if the app in health care cannot be used, the disability isn't the issue.

### **B. Reproductive Rights as Human Rights**

Reproductive rights are also based on the recognition of the right to a free choice and an informed and freely exercised decision regarding the number, spacing, and timing of children and the means available to make such a choice, and freedom from coercion, discriminatory attitudes and violence in the context of sexuality and reproduction.<sup>5</sup> Reproductive rights have a special dimension for women with disabilities. Article 25 also requires States to provide disabled persons access to the same range, quality and standard of healthcare as other persons, including in sexual and reproductive health services.<sup>6</sup> Article 23 also explicitly provides that disabled persons have the right to make their own choices regarding the number and spacing of their children, access to information suitable for their age and maturity, and equal parental rights.

### **C. Assistive Technology and Digital Health**

Assistive technology is defined by WHO as technology whose main purpose is to maintain or improve the functioning and independence of an individual and thus to promote his/her well-being and independence, such as screen readers, communication devices, and wheelchair accessible medical equipment.<sup>7</sup> Assistive technology can help a deaf woman to access a virtual consultation, help a woman with visual impairment to navigate a family planning app, or help a woman with limited mobility to receive a prenatal consultation without leaving home.<sup>8</sup>

## **III. INTERNATIONAL HUMAN RIGHTS STANDARDS**

### **A. The CRPD Framework**

The CRPD is the world's most comprehensive international disability law document. Particularly, several provisions are directly relevant to digital health and reproductive rights which have been ratified in India in 2007.<sup>9</sup>

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<sup>5</sup> ICPD Programme of Action (n 1) para. 7.3; Beijing Platform for Action, adopted at the Fourth World Conference on Women, Beijing, 4–15 September 1995, UN Doc. A/CONF.177/20 (1995), para. 94.

<sup>6</sup> CRPD (n 4) Art. 23(1)(b) and (c); Art. 23(2).

<sup>7</sup> WHO, Priority Assistive Products List (Geneva: World Health Organisation, 2016) 7; WHO, Assistive Technology (Fact Sheet, 18 May 2018).

<sup>8</sup> WHO, Global Strategy on Digital Health 2020–2025 (Geneva: World Health Organisation, 2021) 12–14 ('Digital Health Strategy').

<sup>9</sup> “Committee on the Rights of Persons with Disabilities, General Comment No. 3 on Women and Girls with Disabilities, UN Doc. CRPD/C/GC/3 (25 November 2016), para. 38.”

According to Article 9 of the CRPD, “States have a duty to ensure that persons with disabilities have access, on an equal basis with others, to information and communications technologies”. This includes taking measures to ensure access to the internet and other new technologies. This has been broadly interpreted by the Committee on the Rights of Persons with Disabilities to encompass digital health platforms.<sup>10</sup>

Under article 25, States have to ensure that persons with disabilities have access to health care, including sexual and reproductive health services. Importantly, it forbids discrimination against people with disabilities in health insurance coverage, and mandates access to equal quality health care for people with disabilities. The Committee has pointed out that inaccessible health-related information systems are a violation of Article 25.<sup>11</sup>

Article 4(1)(f) calls on States to take steps to ensure universal design, which means that the design of digital health products and services must be possible to use by all people, as far as possible. It is the law that mandates access to users with different abilities for reproductive health apps, telemedicine platforms and government health portals.

## **B. WHO Standards and Guidelines**

WHO has always identified the issue of reproductive health of people with disabilities as one of concern. The WHO report on disability (2011) identified physical barriers at facilities, communication barriers, lack of skill of health workers and high cost as specific barriers to access to healthcare for persons with disabilities.<sup>12</sup> The WHO's Global Strategy on Digital Health calls for all systems to be accessible, and to not leave anyone behind. The approach recommends that health apps are screen-reader compatible, include sign language, and be accessible to low-tech users. It also calls upon Governments to tackle the digital divide by providing affordable connectivity in underserved communities. In collaboration with the World Wide Web Consortium (W3C), WHO's web accessibility guidelines suggest that all public health websites and applications adhere to the Web Content Accessibility Guidelines (WCAG) 2.1. Among other requirements of these guidelines: provision of alternatives to non-text information, captioning of spoken information, and provision for keyboard-only access

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<sup>10</sup> Committee on the Rights of Persons with Disabilities, General Comment No. 2 on Accessibility, UN Doc. CRPD/C/GC/2 (22 May 2014) paras. 21-23.

<sup>11</sup> “Committee on the Rights of Persons with Disabilities, General Comment No. 3 on Women and Girls with Disabilities, UN Doc. CRPD/C/GC/3 (25 November 2016) para. 38.”

<sup>12</sup> World Wide Web Consortium (W3C), Web Content Accessibility Guidelines (WCAG) 2.1 (W3C Recommendation, 5 June 2018, updated 21 September 2023) <https://www.w3.org/TR/WCAG21/> (Last accessed 20 May 2026)

### C. CEDAW and Intersectional Discrimination

CEDAW bans women's discrimination in all health sectors including reproductive health. The CEDAW Committee in its General Recommendation No. 24, on the right to health, specifically emphasizes the need for states to make sure that health systems address the health needs of women, including women with disabilities.<sup>13</sup> The notion of “intersectional discrimination” is important here. Women with disabilities are discriminated against not just for being women, but also for being disabled. They are subjected to a layered discrimination based on two identities. Digital health design which does not consider or contemplate this intersection deprives these women of their rights on multiple rights grounds.

## IV. THE INDIAN LEGAL FRAMEWORK: AN ASSESSMENT

### A. Constitutional Guarantees

The Constitution of India guarantees ensures various rights. Article 14 ensures equality before the law and equal protection of law. Art. 15(1) states that there will be no discrimination on the basis of, sex, among others. The right to life and personal liberty is guaranteed by Article 21. The Supreme Court of India in a series of rulings has now extended the right to life to a wide right to health including reproductive health. In *State of Punjab v. Mohinder Singh Chawla*,<sup>14</sup> the Supreme Court has held that the right to health being a fundamental right is part of Article 21 of the Right to Life. The State's failure to provide adequate healthcare is a violation of Article 21 as per the above judgment in *Paschim Banga Khet Mazdoor Samity v. State of West Bengal*<sup>15</sup>. The most important decision on reproductive rights was *Common Cause v. Union of India*,<sup>16</sup> which held that the right to live with dignity also includes the right to make decisions about one's own body, including reproductive decisions. The failure to provide digital reproductive health services for women with disabilities is a violation of the right to life and dignity under Article 21 of the constitution, which is supported by this jurisprudence. Article 15(3) also provides for special provision in favour of women and children. This provision has been interpreted as providing for the taking of positive steps to deal with the compounding disadvantage that women with disabilities experience in accessing health services. The constitutional structure can therefore be used to accommodate a strong disability-inclusive digital health mandate without the need for a specific law.

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<sup>13</sup> CEDAW Committee, General Recommendation No. 24 (n 9) paras. 6, 12; CEDAW Committee, General Recommendation No. 18: Disabled Women, UN Doc. A/46/38 (1991).

<sup>14</sup> *State of Punjab v. Mohinder Singh Chawla*, (1997) 2 SCC 83

<sup>15</sup> “*Paschim Banga Khet Mazdoor Samity v. State of West Bengal*, (1996) 4 SCC 37, para. 9.”

<sup>16</sup> *Common Cause v. Union of India*, (2018) 5 SCC 1, para. 198.

## **B. The Rights of Persons with Disabilities Act, 2016**

Section 3<sup>17</sup> makes a general disability discrimination prohibition. Specifically, Section 25<sup>18</sup> covers reproductive rights, and requires the government to implement measures to prevent people with disabilities from undergoing non-consensual medical procedures and to ensure that those with disabilities have equal access to reproductive health care information. Section 40 gives the Central Government power to make accessibility requirements for ICT systems, Section 42 make accessibility requirements for electronic media to provide closed captioning for people who are hearing impaired. These requirements are statutory provisions that establish a basis for digital health accessibility requirements. But the shortfalls of the RPWD Act are substantial. There is no specific mention of digital health and telemedicine accessibility in the Act. Almost 10 years after the introduction of the ICT accessibility standards in Section 40, no detailed rules of health-specific digital accessibility have emerged. It has been pointed out that the enforcement mechanisms of the Act, which are based on the State and District level Commissioners for Persons with Disabilities, fail to get the required resources and also have lower rates of complaint adjudication; and, critically, that the Act does not make a linkage between disability accessibility and the reproductive health-specific schemes under the National Health Mission and Ayushman Bharat, which means that the disabled women are structurally excluded from the most important public health programmes in India.

## **C. The Telemedicine Practice Guidelines, 2020**

These are the Telemedicine Practice Guidelines, 2020 (Guidelines)<sup>19</sup>, which are issued by the “Board of Governors of the Medical Council of India under the Indian Medical Council Act, 1956,” and are India's key regulatory framework governing digital healthcare delivery. The Guidelines allow for registered medical practitioners to conduct consultations using video, audio and text communication systems, and have led to a substantial increase in the availability of telemedicine, especially during and following the COVID-19 pandemic. However, the Guidelines are disability neutral. They do not require that telemedicine services be available to individuals with visual impairments. There are no legal requirements for sign language interpreters in video consultations, no requirements for alternative communication in the form of text in the case of a deaf patient and no advice on using simplified language or supported decision-making in cases of cognitive disability. The Guidelines' provisions relating to

<sup>17</sup> . Rights of Persons with Disabilities Act, 2016, No. 49 of 2016 (India), ss. 3, 25, 40, 42.

<sup>18</sup> . Rights of Persons with Disabilities Act, 2016, No. 49 of 2016 (India), ss. 25.

<sup>19</sup> Telemedicine Practice Guidelines, 2020, issued by the Board of Governors in supersession of the Medical Council of India under the Indian Medical Council Act, 1956, No. 102 of 1956 (India).

informed consent (express consent for telemedicine consultation) do not provide any guidance on obtaining consent from patients with communication disabilities.

#### **D. The Digital Divide in India**

India has made significant progress in digital connectivity, yet the digital divide remains pronounced. According to the National Sample Survey on Persons with Disabilities (2018), literacy rates among persons with disabilities are substantially lower than the general population, and access to digital devices and the internet is even more limited.<sup>20</sup>

Rural disabled women are at the deepest intersection of digital exclusion. They face barriers of poverty, lack of electricity, absence of affordable smartphones, low literacy, and social restrictions on mobility and autonomy. For these women, digital health is not yet a reality but a promise yet to be delivered.

### **V. COMPARATIVE ANALYSIS: INDIA AND INTERNATIONAL STANDARDS**

India's approach to digital health and women with disability's reproductive right has significant gaps when compared with CRPD and WHO standards. On accessibility of digital health platforms, the CRPD (Article 9) stipulates that ICT systems must be accessible to persons with disabilities. WCAG 2.1 guidelines are recommended by WHO for all health websites. There has been documented criticism of the public health platforms in India, such as CoWIN and the National Health Mission website, that do not meet accessibility criteria. There is no specific legislation governing compliance with WCAG for health applications in India. Second, on accessibility of telemedicine, the CRPD Committee have said that accessible telemedicine is a right, not a privilege.<sup>21</sup> The UK's National Health Service (NHS) has disability accessibility requirements for all NHS digital services, which are specified in the WCAG 2.1 AA – whereas India's Telemedicine Guidelines have none. Third specifically, on reproductive rights: the CRPD's Article 23 and 25 imposes binding obligations on India to achieve equal reproductive healthcare for women with disabilities. The RPWD Act has some provisions that are relevant to accessing services, but it does not have an action plan, a monitoring system or a dedicated

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<sup>20</sup> “Ministry of Statistics and Programme Implementation, Government of India, 'Disabled Persons in India: A Statistical Profile 2016' (New Delhi: MoSPI, 2016); see also National Sample Survey 76th Round, Key Indicators of Social Consumption in India:” Health (2018).

<sup>21</sup> CRPD (n 6) Art. 12; Committee on the Rights of Persons with Disabilities, “General Comment No. 1 on Equal Recognition Before the Law, UN Doc. CRPD/C/GC/1 (19 May 2014), paras. 21–26; Amita Dhanda, 'Legal Capacity in the Disability Rights Convention: Stranglehold of the Past or Lodestar for the Future?' (2007) 34 Syracuse Journal of International Law and Commerce 429”

budget for 2019–2020 for making reproductive health services accessible to disabled women in digital formats. On the fourth issue, data privacy: Digital reproductive health deals with very personal data. Some States have a duty to ensure that the privacy of persons with disabilities is protected pursuant to the CRPD. Compared with the “European Union's General Data Protection Regulation (GDPR)”, which explicitly recognises health data as a special category that deserves special protection, India's Digital Personal Data Protection Act, 2023 (DPDP) offers a general framework for data protection, but does not provide specific protection for health data of persons with disabilities.<sup>22</sup>

## VI. KEY CHALLENGES

The first is the issue of "invisible users. The majority of digital health platforms in India are developed for the majority of people who don't have a disability. Disabled women are excluded from the design process. There is no mainstream practice of universal design in the health technology sector in India, something required by the CRPD. The second one is the cost barrier. Assistive technology devices are costly, like screen readers, hearing aids, and braille displays. There are some devices that are covered under the government's ADIP (Assistive Devices to Persons with Disabilities) scheme, but there is a lack of coverage for digital assistive tools for health. There are no specific subsidy or accessibility requirements for reproductive health apps. The third is the consent and autonomy issue. Women with disabilities, particularly those who have cognitive or intellectual disabilities are often deprived informed consent for reproductive interventions. Most of the time, health professionals, family members, and others make decisions for the disabled woman. If designed poorly, digital health tools can make this even worse by shutting out disabled women from receiving direct health information, and limiting their role in their own health. The fourth is the lack of intersectional data. There is no systematic data on disaggregated reproductive health outcomes of women with disabilities in India.

## VII. RECOMMENDATIONS

The digital health revolution is an opportunity of promise for women with disabilities. Telemedicine can decrease the need to make out of home visits to the hospital. Reproductive health information can be communicated directly and confidentially via mobile health apps. Assistive technology can help women who have not been at the table in health-related

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<sup>22</sup> Digital Personal Data Protection Act, 2023, No. 22 of 2023 (India); Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation), Art. 9.

discussions to play an equal role in their own reproductive health care. “Promise is not delivery.” There is an international human rights framework, rooted in the CRPD and WHO standards that states have binding obligations under it with respect to making digital health accessible, and reproductive rights guaranteed to women with disabilities without discrimination. The CRPD and RPWD Act have been ratified in India, but not much implementation is seen as compared to commitment. The gap is a governance gap, a design gap and most fundamentally a Rights Awareness gap. However, the healthcare developers, policy makers and legislators in India have not fully realised that a health app that can't be accessed is a bad product. It is an offence against human rights. In order to close this gap, changes must be made to the law, accessibility requirements must be mandated, public investment must be prioritized in targeted areas, and an attitude change regarding how reproductive health is understood for women with disabilities is necessary. It is not a case of charity or accommodation but of a right being met. This is the human rights viewpoint this paper has aimed to provide.

## VIII. CONCLUSION

The digital health revolution holds genuine promise for women with disabilities. Telemedicine can reduce the need for inaccessible hospital visits. Mobile health apps can deliver reproductive health information directly and privately. Assistive technology can enable women who were previously excluded from healthcare conversations to participate fully in managing their own reproductive health.

But promise is not delivery. The international human rights framework, anchored by the CRPD and WHO standards, is clear: States have binding obligations to ensure that digital health is accessible and that reproductive rights are guaranteed to women with disabilities without discrimination. India has ratified the CRPD and enacted the RPWD Act, but implementation lags far behind commitment. The gap is a governance gap, a design gap, and, most fundamentally, a rights awareness gap. Healthcare developers, policymakers, and legislators in India have not yet fully internalised that an inaccessible health app is not just a bad product. It is a human rights violation.