

v1: 13 February 2024

## Research Article

# The Universal Accessibility Provisions in Hospitals of New Delhi, India

Peer-approved: 13 February 2024

© The Author(s) 2024. This is an Open Access article under the CC BY 4.0 license.

Qeios, Vol. 6 (2024)  
ISSN: 2632-3834

Raja Singh<sup>1,2</sup>, Laxmi Bohora<sup>2</sup>, Nirupam Madaan<sup>3</sup>

1. Department of Architecture, School of Planning and Architecture Delhi, New Delhi, India; 2. ISAC Centre for Built Environment Policy, India, India; 3. Department of Hospital Administration, All India Institute of Medical Sciences, India

Accessibility is an essential component of healthcare infrastructure, considering that it significantly impacts the well-being and experiences of individuals seeking medical care. Accessibility goes beyond mere convenience; it is a matter of equal rights, legal compliance, and fostering an environment that encompasses accessible built infrastructure and information sharing. The study aimed to identify the current status of public hospitals in Delhi regarding compliance with accessibility standards for a barrier-free physical environment and the time limit for compliance as per the Right for Persons with Disabilities Act, 2016, or the RPwDs Act, 2016. The methodology of the study relied on the Right to Information Act, 2005, or RTI Act of 2005, to request information accessible under the open public domain from 32 public hospitals in Delhi regarding compliance with accessibility standards of the built environment, including the provisions of equal opportunities and access to information as per the RPwDs Rules, 2017. After compiling the results, it was identified that 22 hospitals out of 26 provided the information and were aware of section 45 regarding the time limit stipulated by the RPwDs Act, 2016, while the remaining 6 hospitals denied the information at the time of compilation of the data. In addition to this, the study disclosed that though most hospitals were aware of the RPwDs Act, the compliance with the RPwDs Act, 2016, was not universal, and the limit of making the hospital fully accessible was not universally complied with. Further, there is a need to conduct on-site assessments of hospitals that claim compliance with universal accessibility standards.

Corresponding author: Raja Singh, [rajaresearch@proton.me](mailto:rajaresearch@proton.me)

## Background and Introduction

The UN has defined accessibility as 'giving equal access to everyone,' which involves not only providing access to all possible infrastructure but also to all services. Accessibility can also be defined as the strength and degree to which PwDs are provided for and enabled to live independently and participate in all aspects of life (Venkatesan, Jayakaran, Purusotham, and Rafi, 2012). As per the UN Convention on the Rights of Persons with Disabilities, article nine, which focuses on accessibility, it mentions that the state parties shall make the necessary arrangements to secure the rights of persons with disabilities to have equal access to the built environment, transportation, communications, including information and communication technologies and systems, and other public facilities and services, both in urban and rural areas (UN, 2007). In 2007, India signed the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) and later ratified the same on October 1, 2007. Being a signatory, India is held by important obligations regarding the implementation of the provisions of the convention, harmonization of the country's laws with the convention, and preparation of the country's report. The intention of the convention is to protect, promote, and ensure the full and equal enjoyment of all human rights to persons with disabilities, who constitute 2.68 crore, which is 2.21% of the persons with disabilities population living in India (MOSPI, 2021). The census shows that the population of persons with disabilities has increased in the last ten years, with the figure rising from 21.9 million in 2001 to 26.8 million in 2011 (MOSPI, 2021). Even though persons with disabilities constitute a comparatively small percentage of the country's population, their disabilities should not be regarded as 'objects' of charity but as 'subjects' with rights (UN, 2007). In this regard, the Government of India initially undertook the amendment of laws such as the Persons with Disability Act, 1995 (PWD Act 1995), which was replaced by the Rights of PWD Act, 2016 (RPWD Act 2016) to comply with the UNCRPD (Math, SB, Gowda, GS, et al. 2019).

In developing countries like India, it has been observed that people with disabilities do not have equal access to healthcare services compared to their counterparts without disabilities (Matin, Kamali, Williamson, Moradi, and Solatni, 2019). However, article no. 25 of the UNCRPD stresses that people with disabilities have the right to enjoy the highest attainable standard of health without discrimination based on disabilities. In such cases, universal design ensures the design of products and environments accessible by all people, to the greatest extent possible, without needing adaptation or specialised design (MoUD, 2022). Hospitals are public buildings with the primary duty to provide services to everyone, but restrictions in mobility add to the limitations faced by persons with disabilities (Phaholthep, Sawadsri, and Bunyasakseri, 2017; Varma, Tripathi, Prabhakar, and Parab, 2017). Limitations are encountered by people with disabilities when they attempt to access healthcare services, which directly impact their quality of life (WHO, 2011). In India, studies have reported that persons with disabilities, who constitute nearly 2.21% of the general population, face different obstacles in accessing healthcare services (MOSPI, 2021; Nischith, Bhargava, and Akshaya, 2018). Despite legal mandates for accessibility in many countries, restrictions in movement persist in public buildings, disadvantaging individuals with disabilities, such as wheelchair users (Welage and Liu, 2011). Extensive efforts have been introduced to enhance access to health services. One of the most important of these actions was the adoption of the Rights of Persons with Disabilities Act in India in 2016. The Act was an update to the previous statutes, i.e., the Persons with Disabilities Act of 1995, which fixed a time limit of five years for states to make their existing infrastructure accessible. This is critical as simple amendments in building bye-laws do not work for buildings in retrospect. In contrast, in 2016, the RPwD Act created an over-and-above requirement for existing buildings, in comparison to the building bye-laws, which apply only to new buildings. The deadline of five years after the enactment of the Act and the subsequent notification of the rules in 2017 has already passed on June 15, 2022. However, a walk outside of our buildings will display that very little has changed in the built environment (New Indian Express, 2022). As observed in the study done regarding disabled

facilities in public hospitals in Malaysia, it was reported that most respondents were aware of all the disabled facilities provided at the hospital. However, the audit of the hospitals revealed that the infrastructure needed to be improved for accessibility. This demonstrates that although there is public awareness, there is not enough implementation on the part of public hospitals. Accessibility is not limited to the built environment but touches upon innovative technologies to leave no one behind as a fundamental approach to universal design (Talib, Ghani, Ismail, and Salleh, 2016). Accessibility affects not just the general public but also employees. Ramchandra, Murthy, Shamanna, Allagh, Pant, and John (2017)'s study emphasizes physical access to and within the workplace, along with inaccessible information, communication, attitudes of people, and discriminatory practices that fail to address the needs of employees with disabilities, thereby affecting their employment fairness. The study examines the public hospitals in Delhi to determine whether public hospitals have followed the deadline to be accessible within five years mentioned in the Rights of Persons with Disabilities Act, 2016, which passed on June 15, 2022. The study focuses on examining the status of public hospitals as to whether they are compliant with the standard of accessibility in the built environment and information, including appropriate technologies and systems, and provision of equal opportunities as per the Rights of Persons with Disabilities Rules, 2017. The study used the RTI Act of 2005 as the main research tool to collect data that is available in the open public domain.

### Need for the Study

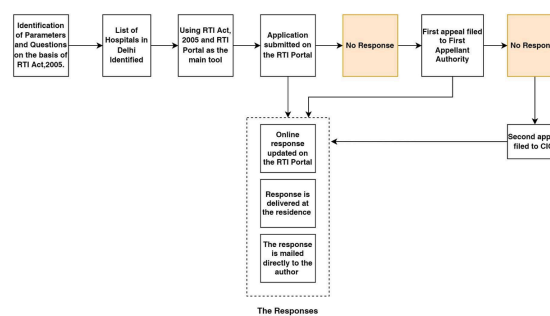
With a range of healthcare systems in various parts of the world, it is shown that people with severe disabilities suffer from poor access to healthcare because of cost, transportation, negative attitudes, long waiting lists, and physical barriers (MoHFW, 2022). In many countries, access for people with disabilities in hospitals is less considered and sometimes taken for granted (Talib, Ghani, Ismail, and Salleh, 2016). Barrier-free access in all parts of government, private hospitals, and other healthcare institutions and centres is a right for all. As per section 45 of the Rights of Persons with Disabilities Act, 2016, the time limit of five years from the date of notification imposed by the Central Government for making all existing infrastructure and premises accessible ended on June 15, 2022. The study provides information regarding the status of accessibility in hospitals in Delhi to identify the problem areas within the overall implementation regarding the provision of equal opportunities for persons with disabilities, assessed by parameters like the presence of PwDs on the payroll and accessible internet websites. The purpose of the study is to offer a glimpse of the accessibility situation in Delhi's government hospitals and to encourage further investigation into this area regarding all-inclusive accessibility and adherence to accessibility guidelines for both physical buildings and hospital websites.

## Materials and Methods

The study used the Right to Information Act, 2005, as the primary research tool to acquire data from publicly owned hospitals bound to provide the information under the act. The act allows the collection of

information that comes under the open public domain where government institutions might be reluctant to provide information; using RTI as a tool to gather information proves to be highly beneficial (Singh, 2020).

Publicly funded hospitals were taken up for this study as they are public authorities under the RTI Act 2005. For the methodology, the first step was to specify the answerable parameters under the RTI Act, 2005. The identified parameters were extracted from the Rights of Persons with Disabilities Act, 2016, in which parameters such as Time Limit, Rules of Accessibility, and others are mentioned (RPwD Act, 2016). Using the RTI portal, the identified 32 hospitals were requested to share the information regarding the eight parameters, as in Table 1. In order to request information through the RTI Act, the applications are submitted via the RTI portal, which is answered by credible and certified sources of information within the hospitals. After the application is submitted, there were two possibilities: first, the application is acknowledged, and the response is shared, see Figure 1. The second is that if the application was not answered or the response is unsatisfactory, a first appeal was filed to the first appellate authority within the provisions of the Right to Information Act, 2005. The information gathered through the RTI Act 2005 by this method ensures accurate, legal, ethical, and certified information from hospitals in the open public domain. The responses to the applications were received by the authors over the course of 5 months (April 2022 – August 2022). Some of the applications had to be followed up, and in some cases, appeals had to be filed. A total of 32 hospitals in Delhi were approached for this study, and 26 hospitals have been taken into consideration. The remaining 6 didn't respond in an apparent violation of the Right to Information Act, 2005. All 32 hospitals are run by the Delhi government (Delhi Government, 2022). The sample size can be justified with a confidence level of 90% and a margin of error of 10.7%, with the total population size being 37 (Government of Delhi, 2022).



**Figure 1.** The figure is a graphic representation of the research methodology adopted for the study, outlining the process from the identification of parameters to appeals for responses and receiving them, Source: Authors

Legend: CIC: Central Information Commission, PIO: Public Information Officer, RTI: Right to Information

S.No.	The information sought under the Right to Information Act, 2005, under the Public Domain
1	Information on the senior officer in the organization responsible for matters related to buildings and the implementation of the law and rules related to buildings.
2	Information on the compliance with section 45 of the Rights of Persons with Disabilities Act, 2016. It mentions the time limit for making existing infrastructure and premises accessible and action for that purpose.
3	Compliance of all the buildings included in your organization, whether on the main campus or any campus, according to the Rights of Persons with Disabilities Rules, 2017, notified on 15th June 2017?
4	Information as per Chapter VI points 15.1. (a), of the Rights of Persons with Disabilities Rules, 2017, where the standard for public buildings has been specified in the Harmonized Guidelines and Space Standards for Barrier-Free Built Environment for Persons with Disabilities and Elderly Persons. Compliance of each building of the hospital.
5	Information as per Part 2 of Section 45 of the Right of Persons with Disabilities Act, 2016, regarding the action plan for providing accessibility in the hospital.
6	Compliance as per Section 45 of the Rights of Persons with Disabilities Act, 2016, with the time limit for implementation of accessibility in hospitals, with the date of completion of accessibility in the buildings.
7	Information on persons with disabilities on the payroll.
8	Information on compliance of the website to the standards for making it accessible for persons with disabilities.

**Table 1.** List of information sought under the RTI Act, 2005, accessible under the public domain from public hospitals in Delhi, India

The study has been posted as a preprint on Qeios.

#### *Non-requirement of ethics clearance for this study*

No visitor, staff member, or employee was contacted personally for this study. This study relied on information accessible in the open public domain through the Right to Information Act, 2005. The request for information was made through an online portal under an appropriate section of the Act, and the information was supplied. The public hospitals have signed and verified the submitted information. Only information that is not personal or third-party information of any individual may be provided under the terms of the Right to Information Act, 2005. Information concerning any human being is thus forbidden. As an abundant precaution, the names of the hospitals have not been mentioned or have been anonymised in this study.

The 'Indian Council of Medical Research: National Ethics Guidelines for Biomedical and Health Research involving Human Participants' prohibits the use of material that is in the public domain and does not include any human subjects (ICMR, 2017). It further goes on to specify that the ethical scopes are only applicable to studies involving human participants, which is not true for this study. This study does not require Institutional Review Board or an equivalent Ethics Committee approval in accordance with the aforementioned scope. The same is stated by the authors.

## Results

The above methodology was adopted to submit applications and appeals to acquire responses. Brief information regarding the responses has been shown in Table 2.

Total No. of Hospitals	Responded	Haven't Responded
32	26	6

**Table 2.** Total responses tabulated for the study highlighting the number of hospitals taken for the study as 32, where 26 hospitals responded and 6 did not, Source: Authors

The information gathered through the RTI Act, 2005, was compiled and tabulated in Table 3. It was found that 22 of the hospitals were aware of section 45 of the Rights of Persons with Disabilities Act of 2016, while the information from the remaining 4 did not reach the authors within the time period. Fourteen of the 26 hospitals were accessible as per the Rights of Persons with Disabilities Rules, 2017, while only one accepted being inaccessible, and 11 admitted being in the process of becoming accessible. Ten hospitals admitted to being compliant with accessibility building standards specified in the Harmonized Guidelines and Space Standards for Barrier-Free Built Environment for Persons with Disabilities and Elderly persons, and 12 were in the process of becoming

compliant with the building standard. For the time limit of five years mandated by Section 45 of RPwDs, 14 of the 26 hospitals had prepared their action plans, and 12 were in the process of having plans made/approved. Fifteen of the 26 hospitals admitted implementing accessibility in buildings as per the five-year time limit, and eight of the 26 disclosed being in the process of retrofitting their buildings to be accessible. Fifteen of the hospitals stated having people with disabilities on the payroll, and 6 responded negatively regarding the presence of people with disabilities on the payroll. Out of the 26 institutions that responded, 8 had accessible websites for people with disabilities, and 7 did not provide a fully positive reply.

S.No.	List of Information sought from the public hospitals	Yes	No	In Process	Didn't Share/Not Applicable
1	Information on the compliance with section 45 of the Rights of Persons with Disabilities Act, 2016. It mentions the time limit for making existing infrastructure and premises accessible and action for that purpose.	22 (84.6%)	0	0	4 (15.4%)
2	Compliance of all the buildings included in your organization, whether on the main campus or any campus according to the Rights of Persons with Disabilities Rules, 2017 notified on 15th June 2017?	14 (53.8%)	1 <sup>a</sup> (3.8%)	11 (42.4%)	0
3	Information as per Chapter VI points 15.1. (a), of the Rights of Persons with Disabilities Rules, 2017, where the standard for public buildings has been specified in the Harmonized Guidelines and Space Standards for Barrier-Free Built Environment for Persons with Disabilities and Elderly Persons. Compliance of each building of the hospital. With respect to Harmonised Guidelines.	10 (38.4%)	0	12 <sup>b</sup> (46.2%)	3 (11.4%)
4	Information as per Part 2 of Section 45 of the Right of Persons with Disabilities Act, 2016, regarding action plan for providing accessibility in the hospital.	14 (53.8%)	0	12 (46.2%)	0
5	Compliance as per Section 45 of the Rights of Persons with Disabilities Act, 2016, with the time limit for implementation of accessibility in hospitals with date of completion of accessibility in the buildings.	15 (57.7%)	0	8 (30.7%)	2 <sup>c</sup> (7.7%)
6	Information on persons with disabilities on payroll.	15 <sup>d</sup> (57.7%)	6 <sup>e</sup> (23%)	0	3 (11.4%)
7	Information on compliance of website to the standards for making it accessible for persons with disabilities	8 (30.7%)	7 (27.2%)	3 (11.4%)	8 (30.7%)

**Table 3.** Compilation of the information received from the hospitals through RTI Act, 2005, Source: Authors

**Footnotes for Table 3:**

**a:** As per reply dated 18.05.2022, a hospital in east Delhi responded 'No' regarding accessibility in all the buildings in the organization as per the Rights of Persons with Disabilities Rules, 2017 notified on 15th June 2017.

**b and c:** A hospital responded as per the reply dated 09.06.2022, 'As it is an ancient semi-permanent heritage building, so it is not feasible to completely make it fully accessible as per guidelines (new construction in certain areas is not possible), the organization has followed the guidelines to whichever extent is possible.'

**d:** Another hospital responded 'No' (as per reply dated 06.05.2022) and 'Yes' (as per reply dated 22.04.2022) having persons with disabilities on the payroll.

**e:** One hospital responded 'Yes' as per the reply dated 30.04.2022 and 'No' as per the letter dated 8.07.2022 having persons with disabilities on the payroll.

4 of the hospitals responded to upgrading under the Accessible India Campaign. This showcases the attempt of the government to make public hospitals accessible, but only 4 out of 26 reported being under the campaign, and out of 4, only one was found to have responded to all the parameters positively.

**Time Limit:** The study highlighted that 14 of the 26 hospitals had prepared action plans for providing accessibility as per Section 45 of the Rights of Persons with Disabilities Act, 2016, and 12 of the 26 were designing/approving their action plans. Only 5 hospitals out of 12 provided a specific date of completion, while the remaining 7 replied that action was under process. It displays the apparent lack of transparency regarding the status of accessibility disguised as 'under preparation.'

**Persons with Disabilities on payroll:** It was found that 15 out of 26 hospitals responded to having persons with disabilities on the payroll. It was reported that 6 hospitals responded negatively to having persons with disabilities on the payroll. Even though the positive response is

higher, there needs to be an improvement in providing equal opportunities to persons with disabilities.

**Provision of accessible website:** It was found that 8 out of 26 hospitals responded to having an accessible website. It was reported that 7 hospitals responded negatively to having accessible websites for persons with disabilities.

## Discussion

This study investigated the status of public hospitals in Delhi regarding compliance with accessibility standards for a barrier-free physical environment and adherence to the time limit for compliance with the disability law with respect to the built environment interventions, and accessible digital platforms for persons with disabilities under the Right for Persons with Disabilities Act, 2016. The findings highlighted higher awareness; however, lower implementation.

**Accessibility in the built environment:** The results highlighted that only 53.8% were compliant with the Rights of Persons with Disabilities Rules, 2017. Even though India has designed its guidelines for the public as Harmonized Guidelines and Standards for Universal Accessibility 2021, which succeeds the earlier version of Harmonized Guidelines 2016, covering sensitization of diverse stakeholders regarding the design, planning, and implementation of universal accessibility in the built environment, the guidelines are yet to be notified in the law. Other guidelines, such as the Model Building Byelaws, 2016, were prepared for the guidance of the State Governments, Urban Local Bodies, Urban Development Authorities, etc., but having more than 40% of public hospitals in the process of becoming accessible highlights an apparent lack of implementation on the ground. Likewise, the annual report of the Department of Empowerment of Persons with Disabilities 2021-22 informs regarding the number of buildings and institutions audited and upgraded for accessibility but fails to specify the status of improvement with respect to actual numbers. While there are limited studies in parts

of India to rate the improvement in accessibility, a case study in the US found that after the enforcement of International Disability Acts, the compliance rates for entrances increased from <50% to 100% in the USA over the course of 16 years (Welage, and Liu, 2011). However, an audit report of 2012 on disability access of public utility buildings located on the campus of the All India Institute of Speech and Hearing in Mysore, Karnataka, reported poor accessibility for persons with disabilities (Venkatesan, Jayakaran, Purusotham, and Rafi, 2012). One of the notable studies in the Dakshina Kannada district of Southern India reported the situation regarding the disability preparedness of primary health care centres in India (Nischith, Bhargava, and Akshaya, 2018). It highlighted the status of physical accessibility of primary health care centres in rural areas of Southern India, which did not fulfill the needs of PwDs. These inaccessibility issues are not limited to rural areas but can be seen in urban areas, causing hindrance to the movement of persons with disabilities, eventually affecting their access to a quality life. Even in the World Bank Report regarding India's commitments to people with disabilities and their outcomes, India's implementation capacity was found to be poor in areas that are responsible for improving the situation of disabled people (O'Keefe, 2009).

**Time Limit:** One of the major aims of the study was to inquire about the adherence to the time limit as per Section 45 of the RPwDs Act of 2016. Only 57.7% of the public hospitals responded adhering to the time limit for the implementation of accessibility in hospitals with the date of completion. However, the percentage could have been affected by the impact of COVID-19. Due to the imposition of the five-year time limit in 2017, it is crucial to note that the global pandemic has exerted considerable pressure on healthcare services. The pandemic strained healthcare services significantly, where hospitals reported that the pandemic increased the disparities in access to care and health outcomes (US Department of Health, 2021). Moreover, the shift of focus from services, accessibility, quality, and quantity of services changed during the pandemic, which might have been one of the causes of the inadequate upgrade of structures as per the RPwDs Act. But the study also highlighted that only 53.8% had their action plans approved to make their campus accessible, while the rest were still in process. This highlights the lack of transparency, which is often disguised by the vague term "under process." However, it doesn't change the fact that having accessible hospitals is all the more crucial, as there are people with permanent and temporary disabilities who visit the hospital in such global crises.

**Accessibility on digital platforms and information sharing:** Accessible healthcare is not limited to the built infrastructure but also includes the availability of services, access to required information, accessible communication, awareness of specific needs of PwDs, and skills to take care of their needs (MoHFW, 2022). As per the Rights of Persons with Disabilities Rules, 2017, information and communication through online websites should follow the standards specified in the guidelines for Indian Government websites. The documents placed on the website shall be in Electronic Publication (ePUB) or Optical Character Reader (OCR) based pdf (RpWD Act, 2016). A study by a group of researchers conducted in India on the evaluation of hospital websites in metro cities of India reported that many Indian hospital websites had low accessibility for people with disabilities, where their compliance with existing accessibility WCAG 2.0 guidelines was found to be relatively low (Kaur, D, Dani, G, et al. 2017). With only about 31% of the hospitals responding as having accessible websites, while 28% denied having accessible websites. These results highlight the stress on PwDs concerning poor communication and information sharing through the internet, resulting in inaccessibility to services and a lack of opportunities like health services, schools, vocational education programs, and employment opportunities (Kumar, Roy and Kar, 2012).

**PwDs on the Payroll:** Under universal access, persons with disabilities should have access to equal opportunities as their counterparts, as mentioned in Section 15.1 of the Rights of Persons with Disabilities Rules 2018, which states that every government establishment shall

consider four percent of the total number of vacancies, including vacancies for persons with benchmark disabilities (RPwD Act, 2016). However, the results of the study highlight that 23% of the public hospitals denied having PwDs on the payroll. As per the data shared by the Prime Minister's Office (PMO) revealed in the Lok Sabha, over the course of three years between 2018 and 2020, the numbers of employed PwDs decreased from 2036 to 1375 (The Wire, 2022). The declining numbers can be attributed to barriers and limitations with regard to transport, the attitudes of their employers and colleagues, and issues related to access to information and the built environment (Joshi & Thomas, 2017).

The data acquired through this study should be used as a base for future research to further examine the accuracy of the information supplemented by the public hospitals as per the RTI Act, 2005.

## Conclusion

The study focused on finding the accessibility standards of public hospitals concerning the Rights of Persons with Disabilities Rules, 2017, regarding the five-year time limit fixed in the Rights of Persons with Disabilities Act, 2016. The study revealed that even though the awareness of the Act was high among the majority of the hospitals that responded, only ten acknowledged being compliant with the building standards. This shows an apparent failure to follow the standards and rules specified in the Act. The findings also revealed a fairly low level of accessibility on digital platforms, with just 30% of hospitals showing adequate information and communication for people with disabilities online. The study was conducted to assess the status of accessibility after the deadline of five years imposed by the Central Government to make all public buildings accessible as per the RPwDs Act 2016. After the deadline was completed on 15 June 2022, the findings proved that only 14 out of 26 had prepared the action plan for providing accessibility in their buildings, while 12 answered as being under process with no specific date of completion mentioned except for 5 hospitals. Fifteen out of 26 hospitals responded that they had made their buildings accessible as per the time limit of five years mentioned in the Rights of Persons with Disability Act, 2016. The results highlight that compliance with accessibility standards as per the five-year time limit is not considered critical in public hospitals in Delhi.

The studies highlighted that even though awareness is high, there is a lack of implementation within public hospitals, which ultimately hinders access for persons with disabilities. To provide equitable opportunities and an independent life in an inclusive society, universal access and a barrier-free environment are crucial. Therefore, it is recommended that continuous audits or recurring inspections of public infrastructure by individuals with disabilities or organizations for people with disabilities be mandated as per policies to ensure that accessibility criteria are being met or maintained. Also, more comparable studies need to be performed to make it easy to check the accessibility status of public hospitals. The need for a universally accessible, barrier-free environment for people with disabilities must be continually brought to the attention of state governments and institutions in order to provide them with equal opportunities, increase their access to resources, and enable them to become contributing members of society. Hospitals, being critical as they are used by people with permanent and temporary disabilities, must make their campuses universally accessible promptly.

## Conflict of Interest

The authors declare that they have no competing interests. No specific funding was received for this study.

## References

- Government of Delhi, 2022: List of Delhi Government Hospitals. (2022). Accessed:9/22/2022:

- [http://health.delhigovt.nic.in/wps/wcm/connect/doit\\_health/Health/Home/Hindi/Health/KR](http://health.delhigovt.nic.in/wps/wcm/connect/doit_health/Health/Home/Hindi/Health/KR), Bhargava M, Akshaya KM, (2018): Physical accessibility audit of primary health centers for people with disabilities: an on-site assessment from Dakshina Kannada district in Southern India. *Journal of Family Medicine and Primary Care*. 2018, 7:1300-1303. doi:10.4103/jfmpc.jfmpc\_177\_18
- Government of India, (2006): National Policy for Persons with Disabilities. Ministry of Social Justice and Empowerment, GoI: India; 2006. <https://disabilityaffairs.gov.in/upload/uploadfiles/files/National%20Policy.pdf>
  - Gudlavalleti, M.V.S., John, N., Allagh, K. et al. (2014) Access to health care and employment status of people with disabilities in South India, the SIDE (South India Disability Evidence) study. *BMC Public Health* 14, 1125 (2014). <https://doi.org/10.1186/1471-2458-14-1125>
  - ICMR, (2017): Indian Council of Medical Research: Indian Council of Medical Research: National Ethics Guidelines for Biomedical and Health Research Involving Human Participants. ICMR (ed): Indian Council of Medical Research, New Delhi; 2017. [https://ethics.ncdirindia.org/asset/pdf/ICMR\\_National\\_Ethical\\_Guidelines.pdf](https://ethics.ncdirindia.org/asset/pdf/ICMR_National_Ethical_Guidelines.pdf)
  - Karami Matin B, Kamali M, Williamson HJ, et al. (2019): The predictors of access to health services for people with disabilities: a cross sectional study in Iranian context. *Medical journal of the Islamic Republic of Iran*. 2019, 33:125. 10.34171/mjiri.33.125
  - Kaur, D. Dani, G. Agrawal (2017): Evaluating the accessibility, usability and security of hospitals websites: an exploratory study. *IEEE*. 2017, 674-680. 10.1109/CONFLUENCE.2017.7943237
  - Kumar SG, Roy G, Kar SS, (2012): Disability and rehabilitation services in India: issues and challenges. *Journal of Family Medicine and Primary Care*. 2012, 1:69-73. 10.4103/2249-4863.94458
  - Math SB, Gowda GS, Basavaraju V, Manjunatha N, Kumar CN, Philip S, Gowda M, (2019): The Rights of Persons with Disability Act, 2016: Challenges and opportunities. *Indian J Psychiatry*. Volume: 61.
  - MoHFW, (2022) Accessibility Standards for Healthcare: Ministry of Health and Family Welfare. MoHFW (ed): Government of India, New Delhi; <https://main.mohfw.gov.in/sites/default/files/Accessibility%20Standard%20for%20Healthcare%20%281%202022.pdf>
  - MOSPI, (2021), Government of India: Persons with Disabilities (Divyangjan) in India - A Statistical Profile: Ministry of Statistics and Programme Implementation. MOSPI (ed): Government of India, New Delhi; [http://www.nhfdc.nic.in/upload/nhfdc/Persons\\_Disabilities\\_31mar21.pdf](http://www.nhfdc.nic.in/upload/nhfdc/Persons_Disabilities_31mar21.pdf)
  - MoUD, (1998): Guidelines and Space Standards for Barrier-Free Built Environment for Disabled and Elderly Person Guidelines. CPWD, Ministry of Urban Affairs & Employment: India; 1998. <https://cpwd.gov.in/publication/aged&disabled.PDF>
  - MoUD, (2002): Manual on Barrier Free Environment. Chief Commissioner for Persons with Disabilities, Ministry of Urban Development, GoI: India; 2002. <https://cdn.nic.in/SJ/PDFFiles/GuidelinesIndia.PDF>
  - MoUD, (2006): Ministry of Urban Development: Model Building Bye-Laws (MBBL)- 2016. Ministry of Urban Development (ed): Government of India, New Delhi; 2006. <https://mohua.gov.in/upload/uploadfiles/files/MBBL.pdf>
  - MoUD, (2014): Harmonized Guidelines and Space Standards for Barrier-Free Built Environment for Persons with Disabilities and Elderly Persons (Draft 2014), Ministry of Urban Development, GoI: India; 2014. <https://cpwd.gov.in/publication/harmonisedguidelinesreleasedon23rdmarch2014.pdf>
  - MoUD, (2022): Ministry of Urban Development: Ministry of Housing and Urban Affairs: Harmonised Guidelines and Space Standards for Persons with Disabilities and Elderly. CPWD (ed): Government of India, New Delhi; 2022. [https://cpwd.gov.in/Publication/HG2021\\_MOHUA.pdf](https://cpwd.gov.in/Publication/HG2021_MOHUA.pdf)
  - Nisphal, KR, Bhargava M, Akshaya KM, (2018): Physical accessibility audit of primary health centers for people with disabilities: an on-site assessment from Dakshina Kannada district in Southern India. *Journal of Family Medicine and Primary Care*. 2018, 7:1300-1303. doi:10.4103/jfmpc.jfmpc\_177\_18
  - O'Keefe, Philip B, (2009): People with Disabilities in India: From Commitments to Outcomes. Human Development Unit South Asia Region (ed): World Bank Group, Washington, D.C; 2009.
  - Phaholthep C, Sawadsri A, Bunyasakseri T, (2017): Evidence-based research on barriers and physical limitations in hospital public zones regarding the universal design approach. *Asian Social Science*. 13:133. 10.5539/ass.v13n4p133
  - RpWD Act, (2016); The Rights of Persons with Disabilities Act, 2016. Gazette of India, New Delhi; 2016. [https://legislative.gov.in/sites/default/files/A2016-49\\_1.pdf](https://legislative.gov.in/sites/default/files/A2016-49_1.pdf)
  - Singh, R, (2020): RTI for Research: Using the Right to Information Act, 2005 for Research in India. Sandeep Kaur (BooksBonanza): New Delhi, India (ed), New Delhi; 2020. 10.5281/zenodo.6088938
  - Talib YA, Abdul Ghani NI, Ismail K, et al. (2016): The provision of the disabled facilities in public hospitals. *MATEC Web of Conferences*. 2016, 66:8. 10.1051/mateconf/20166600081
  - The New Indian Express, (2022) 11.08.2022: <https://www.newindianexpress.com/opinions/editorials/2022/jun/20/actdeadline-ignored-2467573.html#:~:text=>
  - The Wire, (2022); Official Data Shows Central Govt Jobs for Disabled Persons Have Declined Since 2018. (2022). Accessed: 10.8.2022: <https://thewire.in/government/government-jobs-for-persons-with-disabilities>
  - UN, (2007), UN General Assembly: Convention on the Rights of Persons with Disabilities: resolution / adopted by the General Assembly. 21.8.2022: [https://www.un.org/en/development/desa/population/migration/generalassembly/docs/docLibrary/hr/resoln/2007/res60/res60\\_e.pdf](https://www.un.org/en/development/desa/population/migration/generalassembly/docs/docLibrary/hr/resoln/2007/res60/res60_e.pdf)
  - U.S. Department of Health, (2021); U.S. Department of Health and Human Services: Hospitals Reported That the COVID-19 Pandemic Has Significantly Strained Health Care Delivery. 2021.
  - Varma T, Tripathi H, Prabhakar K, et al. (2017): Evaluation of public infrastructures and transportation accessibility for people with disabilities in Ahmedabad city. *Indian Journal of Physiotherapy and Occupational Therapy - An International Journal*. 11:12. 10.5958/0973-5674.2017.00028.4
  - Venkatesan, S., Jayakaran, G.T., Purusotham, P., & Rafi, M. (2012). Disability access audit of public service facilities. *Journal of All India Institute of Speech and hearing*, 31, 190-201
  - WHO, (2011): World Health Organization: World Report on Disability: WHO, Geneva, Switzerland; 2011. <https://www.who.int/publications/i/item/9789241564182>
  - Welage N, Liu KPY, (2022): Wheelchair accessibility of public buildings: a review of the literature. *Disabil Rehabil Assist Technol*. 2011, 6:1-9. 10.3109/17483107.2010.522680
  - Joshi B, Thomas B. Barriers Faced by Persons with Disabilities in Formal Employment in India. *DCIDJ* [Internet]. 2020 Jan. 27 [cited 2024 Feb. 8];30(3):125-32. Available from: <https://www.dcidj.uog.edu.et/index.php/up-j-dcbrid/article/view/349>
  - Ramachandra, S.S. et al. (2017) 'Factors Influencing Employment and Employability for Persons with Disability: Insights from a City in South India', *Indian Journal of Occupational and Environmental Medicine*, 21(1), pp. 36-41. Available at: [https://doi.org/10.4103/ijoom.IJOEM\\_44\\_16](https://doi.org/10.4103/ijoom.IJOEM_44_16)

Supplementary data: available at <https://doi.org/10.32388/M7E7KE.3>

## Declarations

**Funding:** No specific funding was received for this work.

**Potential competing interests:** No potential competing interests to declare.