

## **Case Study: Audit Building of Person with Disable (PWDS) on Selected Klinik Kesihatan in Negeri Johor**

**Nur Farah Shuhada Abu Hassan<sup>1</sup>, Mohd Kamaruzaman Musa<sup>1\*</sup>**

<sup>1</sup>Department of Civil Engineering Technology, Faculty of Engineering Technology, Universiti Tun Hussein Onn Malaysia, 84600 Pagoh, Johor, MALAYSIA

\*Corresponding Author Designation

DOI: <https://doi.org/10.30880/peat.2022.03.02.021>

Received 07 July 2022; Accepted 07 November 2022; Available online 10 December 2022

**Abstract:** In Malaysia, the disabled (PWDs) are continuing to increase from 2018 to 2021 and this community is a group of the worldwide people who should be given an opportunity to enjoy the same life as the normal group on the basis of full equality. People with disabilities do not even have equality in the facilities offered in a place, particularly in public spaces; some places consider these facilities to be unimportant, although this is incorporated in the Malaysian Standard. This problem develops when most people with disabilities facilities are not equipped to meet the needs of the disabled and the universal design is not properly adapted. As a result of the lack of amenities for this group, it has inhibited the desire of individuals with disabilities to continue to use public facilities or be in public locations. The purpose of this research is to learn about the facilities available in Klinik Kesihatan for people with impairments. Second, the study's goal was to identify the people with disabilities facilities that were supplied in compliance with the rules that had been created for Klinik Kesihatan and, finally, to review the sorts of disabled facilities that were available in Johor Klinik Kesihatan. This study used the primary and secondary methods, with assessments performed at a Klinik Kesihatan using a checklist based on the Malaysian Standard Set. The findings indicate that facility design is not user-friendly and is merely in accordance with the criteria of the Uniform Building By-Laws (UBBL). This case study's analysis of the eight Klinik Kesihatan that were examined revealed that just a few of their facilities like the handrail and a few others met the requirements of the Malaysian standard. The case study may have been conducted in the existing structure, and the area around the Klinik Kesihatan may only have 50,000 or fewer residents.

**Keywords:** Person With Disable, Malaysian Standard, And Facility PWD

## 1. Introduction

Persons with Disabilities (PWDs) are those who have long-term physical, mental, intellectual, or sensory impairments that, when combined with various barriers, can limit their full participation and effectiveness in society, as defined by the (Persons with Disabilities Act, 2014). According to United Nations statistics (2010), the number of people with disabilities in Malaysia is estimated to be 596,896 (PWDs Registration Statistics by State and Category Until 31 January 2021). However, the number of people with disabilities who register with the Department of Social Welfare is only estimated to be less than the actual number. Because not all human beings are physically and mentally perfect like normal people, PWD has become synonymous with society both outside and inside the country. As is well known, not everyone has physical, mental, and health perfection. A result, under the Persons with Disabilities Act of 2008 (PWD), disability can be classified as physical, mental, or intellectual. Persons with disabilities are defined in the Persons with Disabilities Act 2008 (Act 685) PWD as people who have physical, mental, or intellectual disabilities that prevent them from fully participating in society's way of life. The difficulty that the disabled will face will be exacerbated by these barriers. However, some of the public places failed to provide complied facilities for PWDs according to the MS and lacking in the provision of user-friendly facilities [1] and to investigate the issues surrounding PWD facilities in Klinik kesihatan, it is necessary to first identify the type of disability or handicap. Visual disability is defined as loss of vision, retinal or corneal damage, sciatic nerve damage, or the absence of eyeballs [2] a ballot box People with disabilities are frequently misunderstood and undervalued they are frequently thought to be unnecessary to have an advantage in facilities because they are not as crowded in society and do not have as important and daily activities as other normal people.

This raises awareness in those who do not value identity in providing pure equality without having to choose the universe in providing services to society, whether they are physically perfect or not. Indeed, it is frequently observed that people with disabilities have more extraordinary skills and talents than other normal people. The government began to pay close attention to this group of disabled people. This serious effort can be seen in the various renovations that have taken place in Malaysian occupational Klinik kesihatans. It not only raises the profile of Klinik kesihatans, but it also kickstarts the public service process in the environment. One of the primary considerations in the development of public buildings should be the planning and design of facilities for the disabled

### 1.1 Problem statement

PWDs were recognized as social stigma, lack of capacity, lack of social acceptance, lack of public acceptance and social ignorance [3] Support by the line, the non-compliance of the sizes of lifts and toilets also restricted PWDs to freely access and use the facilities provided. Also, other facilities for PWDs that do not comply at the public transportation station are doorway, disabled parking, signage, ramp, curb and handrail [1]. The authorities must be aware that treatment for the disabled is available in Klinik kesihatan. To ensure that the community does not exclude the disabled community, the government must apply equality among the community members. However, various government facilities and Klinik kesihatan fail to meet the authorities' standards.

### 1.2 Aim

The purpose of this study is to perform a site visit to find the selected klinik kesihatan have disability facilities that follow Malaysian standards. To attain the above goals and objectives, the following key objectives are outlined:

1. To determine out the facilities provided for community with disabilities in Klinik kesihatan at Johor District.
2. To find the people with disabilities facilities provided in accordance with the guidelines has been established for Klinik kesihatan, and
3. To assess the types of disabled facilities available in Johor Klinik kesihatan.

## 2. Materials and Methods

There was appropriate methodology process in direction of achieving the objectives of this study. In order to achieve this study, several procedures to conduct the study have been selected as shown in the overview of methodology process in Figure 1.

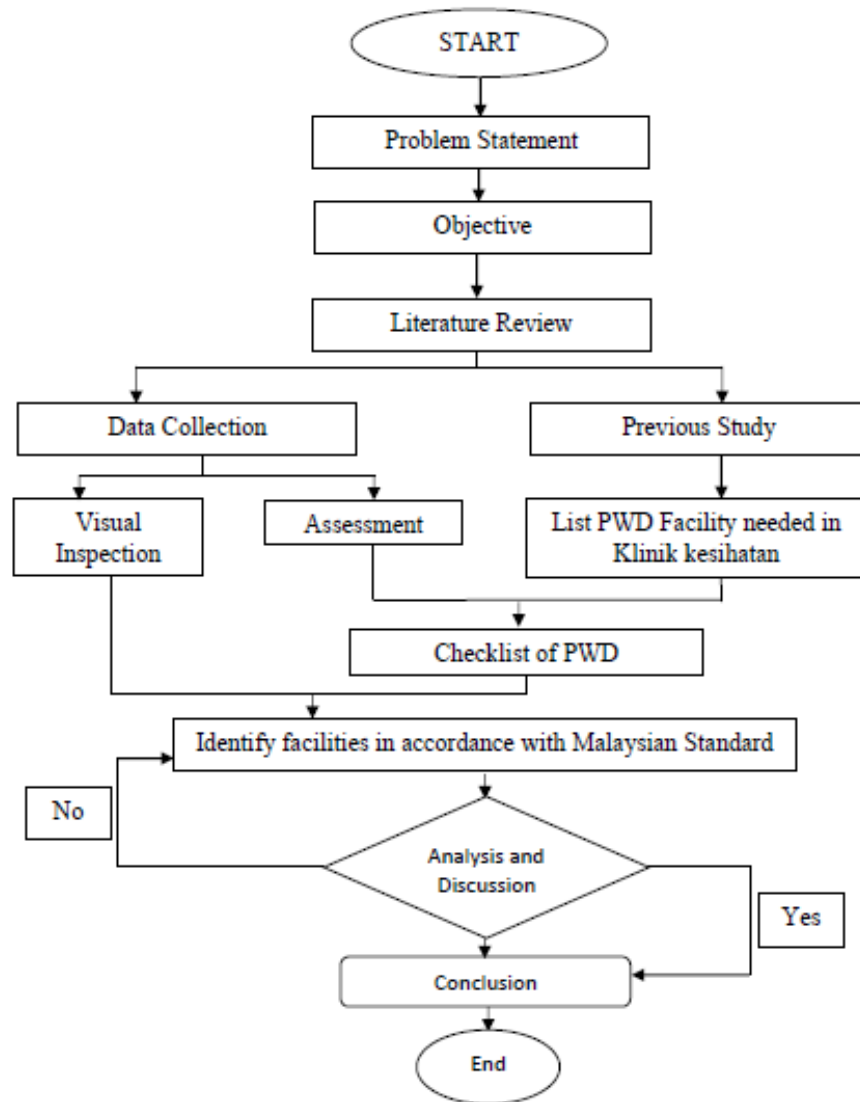


Figure 1: Flow Chart of Entire Project

### 2.1 Materials

To successfully complete the research plan, the preparation of the materials is absolutely necessary. The following is a checklist for recording each health clinic that has been chosen based on the facility that has been put up.

### 2.1.1 Person with Disabilities (PWD)

According to the 2014 Persons with Disabilities Act, "PWDs" are those who have long-term physical, mental, intellectual, or sensory impairments that, when combined with various barriers, can prevent them from participating fully and effectively in society. The government does not discriminate against the disabled, but rather provides services to them

### 2.1.2 Classification of PWD

Definition of disability includes forms of disabilities and the meaning of various disability models. A disability is defined as a condition or function that is severely impaired in comparison to an individual's or group's customary standard. Individual functioning is referred to by the word, which includes physical impairment, sensory impairment, cognitive impairment, intellectual impairment, mental illness, and many types of chronic disease. Disability classifications also acknowledge the impact of physical and social environmental factors in influencing disability outcomes. Disabilities can affect people in different ways, even when they are the same sort of impairment. Some disabilities, known as invisible disabilities, may be concealed. There are numerous kinds of impairments.

- i. Hearing Impairment
- ii. Impairment of Vision
- iii. Impairment of Speech
- iv. Physical Impairment
- v. Disabilities in Learning
- vi. Mental Illness
- vii. Disabilities in Multiples

### 2.1.3 Type of Klinik Kesihatan in Malaysia.

Each clinic in Malaysia has a distinct scope for its own use and is tailored to the capacity or demographics of the local population; thus, it defines universal design as the process of creating products and environments that are as universal as possible without being tailored to specific groups of people. Universality and flexibility are critical terms in universal design, as they promote an inclusive design that accommodates people with varying abilities and other characteristics. However, the Klinik kesihatan used in this study are of a particular type, namely type 3, the majority of which are located in between urban and rural areas and by population are.



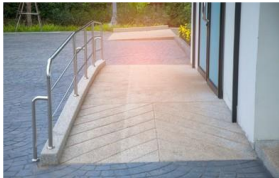


### 2.1.4 Guideline Malaysian Standard (MS)





According to the MS that has been established since 1900 and all applicable compliance and stipulations, all buildings must comply with the established MS. Every one of us, regardless of circumstance. The summarizes the different acts, regulations, and MS that pertain to the use of disabled-access facilities

### 2.1.5 Characteristics of PWD Facility

There are numerous types of disabled facilities in Malaysia, according to Malaysian Standard. However, some of us are still unaware of the facility's presence in the building. Certain individuals are unaware whether the facility was built for disabled or general use. As a result, this could result in others abusing PWDs facilities. Lack of awareness can also affect PWDs, as they may be unable to discern which areas of the building contain appropriate facilities for their disabilities and specific needs. However, the community must first understand what PWDs is and their rights before being informed about the special facilities reserved for them

**Table 1: Facility Type and Measure Standard for Persons with Disabilities (Malaysia Standard)**

No	Item of Facility	Specification
1	Parking PWD 	The minimum width and length of a parking place for a car are 3 600 mm and 5 400 mm, respectively. With a minimum width of 1 200 mm, this minimum width covers the transfer area behind the car. Figure 4 depicts a single parking area with a single aisle.
2	Pathway 	The unobstructed width of the path shall be: a) not less than 1 800 mm for constant two-way traffic; b) not less than 1 500 mm for frequent two-way traffic, provided that passing places are included at maximum 25 m intervals; c) not less than 1 200 mm for infrequent two-way traffic; a passing and turning space of at least 1 800 mm 2 000 mm should be provided for every 25 m
3	Ramp 	Ramps provide an accessible passage between level changes. A ramp with the proper slope can allow accessibility without the use of a mechanical equipment. Ramps may be the only realistic solution for persons who are unable to utilise steps or stairs, although stairs may be preferred by others..
4	Toilet 	Located to provide a minimum clear space of 40 mm from an adjacent wall or other obstruction; <ol style="list-style-type: none"> <li>have an overall projection of not more than 100 mm from any side obstruction; clearance under the 270° arc along the full length of the handrail for finger indentation; and</li> </ol> Have a smooth but adequate resistance to hand slippage surface.
5	Signage 	lifts must be available on all accessible levels of a building. Lifts are preferred and must be accessible to everyone, including disabled individuals. At least one lift car must be configured as a wheelchair lift adjacent to a building entrance that is accessible to disabled people.

No	Item of Facility	Specification
6	Building Entrance 	All principal public entrances in new accessible constructions should be accessible to an ambulant impaired person. A wheelchair user should be able to reach at least one entrance per facility. The accessible entrance(s) in new buildings should be the principal entrance(s) intended for general public use. Each accessible entry should be connected to accessible indoor or outdoor parking areas, local public transit stops, and drop-off zones via accessible walkways. In multi-story buildings, the accessible entrance should provide access to an accessible elevator or lift that is easily positioned.
7	Door and Window 	Accessible doors should be made in such a way that they may be operated by one person with minimum effort in a single motion. For those with disabilities, power-operated doors are the best option. The activator mechanism should be either automatic or easily accessible. A sign, a door handle, an extra pull handle, glazing, and a kick plate should all be included on an accessible door.
8	Stair 	The risers and treads of a set of stairs should be uniform. There should be no open risers on a flight of steps. Stair noses should protrude as little as possible. Stair handrails should be built on both sides and in a continuous pattern. Stair handrails should extend past the top and bottom of the stairwell.
9	Handrails 	Handrails should be extended horizontally beyond the ramp's top and bottom (min. 300 mm) At the beginning and end of each handrail/grab bar, a small plate should be placed to indicate its position to those with visual impairments. The colour of the handrails/grab should contrast with the surrounding area. Handrails linked to ramps should be at a height that allows wheelchair and crutch users to easily grasp them.
10	Path of The Disabled	A passing place or places must be provided on any path with a surface width of less than 1 800 mm and an overall length of more than 50 m. Passing spots should be no more than 25 meters apart. This does not apply to a landing on a sloped path, a ramp, steps, or a stair.

## 2.2 List Malaysia Standard for People with Disabilities

Malaysian Act	Descriptions
The Persons with Disabilities Act 2008 (Act 685)	The Persons with Disabilities Act 2008 was enacted in December 2007 and is Malaysia's first law addressing PWDs charity and welfare. Part III of Act 685 requires that persons with disabilities have the same right to access and use of public facilities, buildings, amenities, and services as people without disabilities.
Uniform Building (Amendment) By-Laws (UBBL) 1991	This requirement is spelled out in the UBBL, which is governed by the 1974 Street, Drainage, and Building Act. Under the amended section 34A of the UBBL, buildings must provide access for PWDs to enter, exit, and remain within the premises. This section applies to both new and existing structures. Within three years, the existing building will be improved.
Malaysian Standard 1184:2002, Code of Practice for Access to Public Buildings by Disabled Persons (First Revision)	MS 1184:1991 is superseded by this standard. This Malaysian Standard specifies the requirements for building elements and associated facilities that facilitate access for Persons with Disabilities (PWD). This requirement is applicable to all public buildings that PWD may use.
Malaysian Standard 1183:1990 Code of Practice for Disabled Persons' Means of Escape	SIRIM has issued a Code of Practice for Fire Precautions in the Design and Construction of Buildings (MS 1183). It establishes extraordinary standards of planning, action, and compliance with requirements for fire precautions in the design of public buildings to ensure the safety of disabled persons, particularly during a fire.
Malaysian Standard 1331:2003, Access for Disabled Persons Code of Practice Outside Buildings (First Revision)	This code revised the provisions on designing appropriate facilities for disabled people in external buildings to ensure they can assess and use them as intended. Following publication of the Code of Practice in the State Gazette, all building plans submitted by each state must comply with the requirements. MS 1331:1993 is superseded by this standard.
MS 1184:2014 Malaysian Standard Code of practise for universal design and accessibility in the built environment (Second revision)	MS 1184:2002 and MS 1331:2003 have been superseded by this Malaysian Standard. This MS establishes a range of requirements and guidance for construction elements, assemblies, components, and fittings that relate to the structural aspects of building access both in terms of normal circulation and in the event of an emergency evacuation.
Design that is accessible to all and an environment that is barrier-free	Existing barrier-free guidelines and technical standards are primarily directed at wheelchair users (JICA 2009)

### 2.3 PWD Facility needed in Klinik Kesehatan

To ascertain the installation status and quality of disabled-access facilities, we visited several Klinik kesihatan and took measurements and observations. Prepare a checklist for disabled facilities based on measurement standards and conduct a thorough study. Preliminary inspections of eight Klinik kesihatan were conducted to assess the Klinik kesihatan' facilities.

No	Item	Checklist facility
1	Ramp	
2	Designated accessible parking	
3	Pathways and Building entrance	
4	Handrail	
5	Stairs	
6	Door	
7	Toilet	
8	Signage	

### 3. Result and Discussion

In order to validate the hypotheses and achieve the objective of the study, it is necessary to examine the data that was collected. This chapter goes through the data analysis, the results summary, and the interpretation of the research results of site studies that have been completed.

#### 3.1 Result of the facility for PWD

No.	Name of Klinik / Item	KK1	KK2	KK3	KK4	KK5	KK6	KK7	KK8
1	Designated accessible parking	/	/	/	/	/	/	X	/
2	Pathways and Building entrance	/	/	/	/	/	/	/	/
3	Ramp	/	/	/	/	/	/	/	/
4	Handrail	X	X	X	X	X	X	X	X
5	Stairs	/	/	/	/	/	/	/	/
6	Signage	/	/	/	/	/	/	/	/
7	Toilet	/	X	/	/	/	/	/	/
8	Door	/	/	/	/	/	/	/	/

/ : Qualification X : Not qualification

All of the objectives specified in the first chapter are discussed in this study, and the results are obtained. Finding Klinik kesihatan in certain districts that either provide or do not provide facilities for the disabled to facilitate their utilisation. As stated in objective (a), the selected Klinik kesihatan provide



facilities for the disabled; nevertheless, objective (b) discovered that several PWD facilities and Klinik kesihatan do not fulfil the requirements set forth by Malaysian Standard (MS 1184: 2014), due to a variety of causes. One of them is that this study was conducted in an existing structure, which implies that all of the current amenities and buildings were built according to the existing plan. Aside from that, it's probable that the district's population will have an impact on the Klinik kesihatan's services. The majority of the guidelines that are not followed are dimension or size for a facility, for example, the size on the door of the disabled toilet, indicating that the toilet is not a disabled toilet; the second is disabled parking, indicating that the size used is smaller than the original measurements, indicating that the area of the car parking site is insufficient to follow the Malaysian Standard guidelines. Finally, objective (c) of the assessment, namely the site visit and checklist found in MS1184: 2014, found that the facilities provided by Klinik kesihatan around the selected district are satisfactory because each clinic provides the necessary facilities for the disabled despite not following the specifications set by the Malaysian Standard, but every existing building should meet 15 disabled facilities, and this study has shortened.

In this case, it was discovered that only eight facilities out of the fifteen required by Malaysian Standard 1184: 2014 have been edited, and that out of that number, the facilities provided by all Klinik kesihatan from various districts have met it, despite the lack of some aspects or failing to meet all of the specified specifications but can be counted as providing. This is because any Klinik kesihatan that does not meet the criteria established by MS 1148 is likely to run into issues, such as parking that does not have enough room for disabled individuals, resulting in parking that is not of equal size. Apart from that, the most essential feature is the lack of handrails, which are only supplied on the stairs and not on ramps or other areas that must be accessible to the disabled. As a result, health Klinik kesihatan should set an example for other government facilities because they are one of the places that people from all walks of life, including those with disabilities, will attend. As a result, regardless of the population in the area, the authorities must pay close attention to the facilities supplied by each Klinik kesihatan facility.

The importance of the issue of disability access and amenities must be seen as part of the Government's obligation, particularly the Klinik kesihatan. Klinik kesihatan, for example, should completely complement their design plans with the demands of the disabled-on access and facilities without waiting for feedback from local authorities to provide a barrier-free environment and infrastructure. Persons who design for accessibility and convenience must be open to all users, including people with disabilities, and try to improve the built-in environment. This research was conducted because more innovative and good design appears to be very important for all users.

#### **4. Conclusion**

The necessity to comply with the Malaysian Standard Code of Practice (MS) on Access to Persons with Disabilities is explicitly mentioned in the Uniform Building By-Laws (Amendment) (UBBL) 1991, and local governments must offer access and facilities for everybody, particularly the disabled, in their Buildings. In addition, the local government is responsible for approving planning applications and building designs. As a result, the structure appears to be highly complete, with instances of access and the greatest facilities that encourage access for all users, regardless of their physical abilities.

The biggest obstacles to physical activity were discovered in this study to be barriers in the built environment. A barrier-free environment, on the other hand, strives to provide a comprehensive facility for the Klinik kesihatan or a facility to house the physically challenged who visit the clinic. To be of equal use, it is better to design by producing maximum utility for the greatest number of individuals, regardless of age, culture, education, or level of ability.

Based on the research findings, the Klinik kesihatan building is found to be non-compliant with MS 1184: 2014. As a consequence of the preceding study, there is a location that is very much in line with MS, specifically MPSJ, because it has reinforced the reason why the MPSJ Building was granted the

“Building Recognition Award with Easy Access for the Disabled” at the 2007 National Disability Day Celebration. However, this study also reveals that, for each case study examined, some MS needs of persons with disabilities are partially met, while others are not met at all, including the Klinik kesihatan Building.

### **Acknowledgement**

The author would like to thank Faculty of Engineering Technology, Universiti Tun Hussein Onn Malaysia for its supports.

### **References**

- [1] Isa, H. M., Zanol, H., Alauddin, K. and Nawawi, M. H. (2016). Provisions of Disabled Facilities at The Malaysian Public Transport Stations. MATEC Web of Conferences 66
- [2] Kaur, G., Leong, T. P., Yusof, J. M. and Singh, D. (2015). Perception of People with Disability in Creating Sustainable Public Policy. *Social and Behavior Sciences*, 168, 145-155
- [3] Awang, N. A., Chua, S. J. L., Ali, A. S., Au-Yong, C. P., Naicker, A. S., & Yuliawiratman, B. S. (2021). Persons with disability perception of facilities management service quality: hospital buildings in Malaysia. *International Journal of Health Care Quality Assurance*.
- [4] Rosli, H. F., & Sabri, S. A. (2017). Halangan Fasiliti Pelajar Orang Kurang Upaya (Oku) Di Institusi Pengajian Tinggi Di Lembah Klang. 2, 94–99.
- [5] Rahim, A. A., Abd Samad, N. A., Rahim, C. R. C., & Badhrulhisham, A. (2014). Providing Accessibility for Persons with Disabilities (Pwds) in Malaysian Existing Mosques. UD 2014, Campus LTH at Lund University, Sweden, 15-18 June 2014
- [6] Rosli, S. N., & Zulhumadi, F. (2019). The perception towards disabilities students’ facilities: A case study in Universiti Utara Malaysia. In *Symposium on Technology Management and Logistics (STML Go Green) 2019 (No.1, PP 1-10)* Universiti Utara Malaysia
- [7] Bashiti, A., & Rahim, A. A. (2016). Physical barriers faced by people with disabilities (PwDs) in shopping malls. *Procedia-Social and Behavioral Sciences*, 222, 414-422.