

Inclusive Healthcare Facilities Management

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Abstract: This study examines how adopting an inclusive approach to facilities management (FM) can better meet the needs of Persons with Disabilities (PWDs) in government hospital buildings across Malaysia. While the Persons with Disabilities Act 2008 was introduced to ensure equal access to public services for PWDs, various barriers—including societal attitudes and physical limitations within the built environment—have continued to hinder their full participation in society.

Previous research has highlighted a major concern: the gradual decline in facility quality due to inadequate maintenance, which significantly impacts PWDs users. To address this issue, the study employs a mixed-methods approach, combining questionnaire surveys with semi-structured interviews, to explore ways to improve the management of PWD-related facilities.

Findings indicate that services for PWDs often fall short of expectations, with many relevant facilities neglected during routine maintenance. Notably, PWD-specific features are frequently absent from Preventive Planned Maintenance (PPM) checklists and are rarely considered in performance evaluations. Inspections tend to be general in nature, relying heavily on inspectors' discretion rather than focused assessments of PWD needs.

Although complaints about PWD facilities represent a small portion of total reports, they are often critical, especially concerning safety, accessibility, and usability. These issues typically stem from poor maintenance and are exacerbated by difficulties in accessing information and using the facilities effectively. In response, the study proposes a dedicated maintenance guide to strengthen current management strategies. This guide aims to improve the upkeep and performance of PWD facilities in government hospitals, fostering a more inclusive environment for all users

Keywords: Facilities, healthcare, development, persons with disabilities (PWDs), accessibility.

INCLUSIVE HEALTHCARE FACILITIES MANAGEMENT

Case Study Approach



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Table of Contents

List of Tables	vii
List of Figures	ix
List of Abbreviations	xi
Preface	xiii
Chapter 1 Introduction	1
Chapter 2 Facilities Management	5
Chapter 3 Persons with Disabilities (PWDs) in Malaysia: Overview	21
Chapter 4 Case Study Approach	37
Chapter 5 PWDs Facilities Maintenance Strategy, Maintenance Performance and Maintenance Guide	69
Chapter 6 Conclusion	83
Bibliography	87
Biography	109
Index	111

List of Tables

Table 3.1	The key principles of universal design (NCSU, 1997 as cited in (Kadir, Jamaludin, & Rahim, 2018)	25
Table 3.2	The Development of Universal Design in Malaysia (Rahim, 2013) as cited in (Bashiti & Abdul Rahim, 2015)	26
Table 3.3	Persons with disabilities' (PWDs) facilities and components ((Department of Standards Malaysia, 2014)	30
Table 3.4	PWDs' components incorporating in other facilities (Department of Standards Malaysia, 2014)	32
Table 4.1	Selected case studies	46
Table 4.2	List of hospitals under the Ministry of Education MOE (Pre-council meeting-Task force Meeting on Faculty Medicine Issues in Malaysia IPTA, 9 TH January 2018. Website: ummc.edu.my)	47
Table 4.3	Condition assessment rating (Public Works Department, 2013)	53
Table 4.4	Priority assessment rating (Public Works Department, 2013)	54
Table 4.5	Matrix analysis on the level of physical condition for building components and level of maintenance priority (Public Works Department, 2013)	55
Table 4.6	Building classification rating (Public Works Department, 2013)	55

Table 4.7	Sampling design (Adapted from (Chua, 2012; Sekaran & Bougie, 2009)	58
Table 4.8	Details on the category of physical disability (Department of Social Welfare, 2016)	59
Table 4.9	Some conventions for defining effect sizes (Cohen, 1988; Grissom, 1994 as cited in Murphy et al., 2014)	61
Table 4.10	Number of respondents for phase 1 data collection	62
Table 4.11	Number of respondents for phase 2 data collection	63
Table 4.12	Archival records as a source of evidence (Yin, 2009)	65
Table 4.13	Respondents for the validation process	67
Table 5.1	Proposed Maintenance Guide for PWDs Facilities	76

List of Figures

Figure 2.1	Management issues to deal with for the inclusive built environment (Sawyer & Bright, 2007)	7
Figure 2.2	Barriers to the inclusion of some of the population (Hewitt, 2013)	8
Figure 2.3	Day-to-day management aspect (Hewitt, 2013)	8
Figure 2.4	Building maintenance framework (BIFM, 2014)	11
Figure 2.5	Maintenance strategy BS3811:1984 (British Standard Institution, 1984)	14
Figure 4.1	Research design and research process, adapted and modified ((Deraman, 2014)	43
Figure 4.2	Basic types of design for case studies (Adopted from COSMOS Corporation as cited in Yin, 2009)	45
Figure 4.3	Illustration of case study selection	46
Figure 4.4	Unit of analysis	50
Figure 4.5	Research ethics approval process for the hospital under Ministry of Health	51
Figure 4.6	Research ethics approval process for Hospital UKM	52
Figure 5.1	Current Maintenance Strategy for PWDs facilities in Hospitals	72

List of Abbreviations

CLS	Cleaning Services
FEMS	Facilities Engineering Maintenance Services
FM	Facilities Management
FMS	Facilities Management Services
HSS	Hospital Support Services
HWMS	Healthcare Waste Management Services
LLS	Linen and Laundry Services
MOH	Ministry of Health
MOE	Ministry of Education
MREC	Medical Research Ethics Committee
MS	Malaysian Standard
PWDs	Person with Disabilities
TWSI	Tactile Walking Surface Indicator

Preface

In today's world, inclusivity stands as a core value in ensuring that all individuals—regardless of ability—have equal access to essential services and infrastructure. Facilities management (FM) plays a pivotal role in fostering inclusive environments by identifying and addressing the barriers that limit accessibility and participation. This preface introduces a study aimed at enhancing the facilities management of services for Persons with Disabilities (PWDs) in government hospital buildings in Malaysia, shedding light on existing gaps and exploring opportunities to create more accessible and inclusive spaces. The implementation of the Persons with Disabilities Act 2008 marked a significant milestone in the effort to safeguard the rights, well-being, and dignity of PWDs. The Act affirms that PWDs are entitled to full access to public services, just like any other member of society. However, persistent challenges—including a lack of awareness, prevailing negative perceptions, and physical barriers within the built environment—continue to hinder their full participation. These challenges are further exacerbated by facility deterioration due to poor maintenance or neglect, posing additional difficulties for PWD users. Such issues are especially critical in hospital settings, where accessibility is essential.

This study adopts a mixed-methods approach, incorporating both questionnaire surveys and semi-structured interviews, to evaluate the current condition and management of PWD facilities in Malaysian government hospitals. The findings reveal that service quality for PWDs remains below satisfactory levels, with specific PWD facilities and elements often excluded from routine maintenance procedures. One critical discovery is that the maintenance of PWD-related components is frequently

overlooked, as current Preventive Planned Maintenance (PPM) checklists do not anticipate their unique needs. As a result, these facilities are left out of performance measurements, and their upkeep largely depends on user complaints rather than proactive management. While the percentage of PWD-related complaints may be relatively low compared to the total number of complaints, the severity and criticality of these issues are significant. Barriers identified are not limited to design inadequacy due to the age of the building, but also extend to safety concerns, inaccessibility, and difficulties in using the facilities due to poor maintenance practices. Other concerns include insufficient access to information and challenges in navigating and utilising hospital spaces.

In response to these challenges, this study proposes the development of a maintenance guide aimed at enhancing current maintenance strategies and improving overall performance in managing PWD facilities. By addressing these maintenance and operational gaps, the study seeks to contribute to the ongoing effort of creating more inclusive and accessible healthcare environments for PWDs in Malaysia's government hospitals.

CHAPTER

1

Introduction

An inclusive built environment supports the full participation of persons with disabilities (PWDs), enabling them to access equal opportunities (Yau, 2016). This approach acknowledges the diversity of human needs and promotes design solutions that allow the majority of individuals to navigate and use the built environment independently (Sawyer & Bright, 2007). In this context, Facilities Management (FM) plays a crucial role by identifying existing barriers and implementing strategies or management practices aimed at removing or mitigating these obstacles, thereby ensuring equitable service provision (Hewitt, 2013).

The implementation of the Persons with Disabilities Act 2008 has aimed to ensure the protection, rehabilitation, development, and wellbeing of persons with disabilities (PWDs). An amendment to the Uniform Building By-Laws of 1984 was made in 1990, introducing Clause 34A, which requires buildings to comply with the Malaysia Standard 1184 on universal design and accessibility in the built environment. Recently, there has been an increasing focus on addressing the needs of PWDs in various sectors, including educational institutions, public transport, national parks, shopping malls, hotels, the tourism industry, mosques, and public buildings (Bashiti & Abdul Rahim, 2015; Bashiti & Rahim, 2016; Ismail, Marzuki, Daud, & Borham, 2015; Ja' Afar, Rahim, Samad, & Rahim, 2017; Kadir & Jamaludin, 2012; Lau, Ho, & Yau, 2014; Rahim

CHAPTER

2

Facilities Management

For some time, it has been evident that the management of buildings and estates has increasingly been understood within the framework of what is now referred to as Facilities Management (FM). Initially viewed as a function focused on building management or maintenance within an organisation, FM has since evolved into a more comprehensive concept. It has become deeply integrated into both the core and support services of organisations, reflecting a more holistic approach. Consequently, the definition of FM has expanded to include:

“FM is a distinct management function and, as such, involves a well-defined and consistent set of responsibilities. It is a management of a vital asset organisations facilities. FM combines management with current technical knowledge to provide human and effective work environment. It is the business practice of planning, providing, and managing productive work environments”.

(International Facility Management Association, IFMA)

“FM is an organisational function which integrates people, place, and process within the built environment with the purpose of improving the quality of life of people and the productivity of the core business”.

(Institute of Workplace and Facilities Management, IWFM)

CHAPTER

3

Persons with Disabilities (PWDs) In Malaysia: Overview

People with disabilities (PWDs) make up 1.17% of the total population in Malaysia, with Selangor having the highest number of PWDs, accounting for 55,594 individuals. Among the various types of disabilities, intellectual disability has the largest proportion, with 129, 550 cases, followed by physical disability, which accounts for 125, 491 cases (Department of Social Welfare).

3.1 Acts and standards

Following the ratification of the CRPD, Malaysia enacted the Persons with Disabilities Act 2008 (Act 685) to ensure equal opportunities and provide protection and assistance to persons with disabilities (PWDs) in all circumstances across the country (Amin, Jani, & Zakaria, 2017).

3.1.1 Persons with Disabilities Act 2008 Act 685

The purpose of this Act is to ensure the registration, protection, rehabilitation, development, and wellbeing of persons with disabilities, as well as to establish the National Council for Persons with Disabilities. Part IV of the Act explicitly states that PWDs have the right to access and use public facilities, amenities, services, and buildings on an equal basis with individuals without disabilities. The government and service providers are required to give due consideration and take necessary measures to

CHAPTER

4

Case Study Approach

4.1 Study area

Hospital building comprises complex facilities and services implemented to cater to health needs. Healthcare buildings generally represent one of the most complex building types in terms of maintenance, owing to their high-performance requirements and the complexity of the engineering services needed to sustain a proper patient care level (Chanter & Swallow, 2007). Malaysia has two healthcare system: the government health sector and the private health sector; the government remains the main policymaking and regulatory body for Malaysia healthcare (Ministry of Health, 2016b). Ministry of Health (MOH) is the main contributor towards Malaysian healthcare (Ministry of Health, 2016b). Until December 2014, there are 150 government hospitals where 142 is under MOH to assist an individual in achieving and maintaining a level of health to enable it to carry a productive economic and social life (Ministry of Health, 2016b). This study selects government hospital buildings due to the significantly high usage compared to private hospital buildings. Government hospitals recorded 2,465,727 admissions and 20,260,479 outpatient attendances in 2016, which are substantially higher than private hospitals, which recorded 1,064,718 admissions and 3,932,361 outpatient attendances (Ministry of Health, 2016a).

CHAPTER

5

PWDs Facilities Maintenance Strategy, Maintenance Performance and Maintenance Guide

The current maintenance strategy and maintenance performance implemented for PWDs facilities were investigated through semi-structured interview and archival records.

5.1 Maintenance Strategy and Key Performance Indicators

From the semi-structured interview and archival records data and analysis, it became apparent that there was no specific maintenance strategy implemented for PWDs facilities, and it was maintained using the same strategy as other facilities for all case studies. Three maintenance strategies involve planned preventive maintenance, condition-based maintenance, and corrective maintenance for Government Hospital Buildings. For University Hospitals, four maintenance strategy involves planned preventive maintenance, condition-based maintenance, corrective maintenance, and outsourcing.

For Government Hospital Buildings, five out of eight key performance indicators for the Facilities Engineering Maintenance Services (FEMS) Department were related to the study. It includes (1) the asset needs to function in safe and good condition, (2) Planned preventive maintenance and routine inspection must follow the agreed schedule, (3) Commencement of scheduled corrective maintenance as per agreed, (4) Respond time to a service request and (5) Service request need to be accomplished

CHAPTER

6

Conclusion

Various studies have highlighted the failure of facilities and services to meet the needs of users with disabilities. A key issue identified is that most existing inclusive built environment assessment models focus solely on accessibility during the design and construction stages, often overlooking building management and operation. To partially address this gap in facilities management research, particularly concerning the satisfaction of users with disabilities and the maintenance strategy for facilities catering to their needs, which impacts maintenance performance success, this study was conducted.

The current maintenance strategy implemented for PWDs facilities

The literature review shows that theory has indicated the relationship between maintenance strategy and maintenance performance where the selection of maintenance strategy can affect maintenance performance. Nonetheless, very limited study has discovered the maintenance strategy implemented for PWDs facilities. This link serves as a theoretical foundation for this study to justify the focus given on maintenance strategy to increase the maintenance performance of PWDs facilities provided in Government Hospital Building. The semi-structured interview was conducted to investigate the PWDs facilities

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