

## Research Article

# CLINICAL AUDIT REPORT: NUMBER, REASONS AND INDICATION OF INPATIENT IN CHRONIC WARDS IN HOSPITAL MESRA BUKIT PADANG, SABAH, MALAYSIA

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## Abstract

**Introduction:** The author conducted a clinical audit in Hospital Mesra Bukit Padang, Sabah, Malaysia looking into the number of chronic inpatients as well as the possible reasons for their admissions.

**Hospital Mesra** is one of the four mental institutions funded entirely by the Malaysian Ministry of Health (MMH). The clinical audit may provide an insight for practitioners to work out for viable solutions to the high bed occupancy rate in Hospital Mesra, as well as the other mental institutions in the country.

**Methods:** Information about the possible reasons of admission are gathered from all chronic inpatients who stayed in the hospital during the period of May 15, 2023, to June 30, 2023 (3 months) and assessed their psychiatric condition using the Brief Psychiatry Rating Scale (BPRS). The gathered data were analysed to look for association between. The team also gathered the wards' relevant admission statistics.

**Results:** Social reasons are of the highest frequency: Family refuse to take patient (40%), family uncontactable (35%), awaiting nursing home (10%) and other social issues (13.3%). There is an association between family uncontactable and increment of length of stay in ward. There is no association between the patients' psychiatric condition and the length of stay in ward.

**Conclusion:** Social factors are the most common reason for chronic inpatient stay in HMBP and severity of psychiatric illness is not associated with the length of stay of chronic inpatients. Cost efficiency demands steps to be taken to reduce the inpatient load, such as community outreach programs. *ASEAN Journal of Psychiatry, Vol. 25 (1) January, 2024; 1-8*

**Keywords:** Psychiatry Rating, Family, Chronic Inpatient, Efficiency

## Introduction

Hospital Mesra Bukit Padang is one of four mental institutions under the Malaysian Ministry of Health (MMH). Each covering multiple states, the facilities are tasked to treat the mentally ill, both civil and forensic. It is common to have long stay chronic wards in mental institutions and aside from the one reserved for Criminal Procedure Code (CPC) section 348 (patients ordered by the civil court to be held in ward), there are several chronic wards in HMBP (male and female) [1].

Throughout the years, it was found that the number of psychiatric patients is increasing, along with inpatient admission as well. After completing their acute treatment in HMBP, the doctors found difficulties to discharge these patients back to their home [2]. Most of them, with their mental health stabilized, found to have social issues which the clinicians and allied health units have difficulty resolving. There were not many options available during discussions: To continue trying to contact and negotiate with the families or continue keeping these patients by

transferring them to chronic wards. As establishing our center to be a center of excellence is our vision and hoping to improve the mental health services, a solution must be found in reducing mental institutionalization in Sabah.

## **Materials and Methods**

Mental institutions are tasked to treat the mentally ill and to house those who are deemed unable to return to the normal society. After United Nation and WHO declare the policies of deinstitutionalization (WHO: The World Health Report 2001), multiple studies have mentioned about the rationale of the implementation. The main struggle has always been the economic burden of institutionalization [3].

With the prevalence of mental illness increases, without the community's support, hospital Mesra have faced issues of full occupancy, which leads to the same financial difficulties as mentioned earlier, staggering the quality of care provided to the patients [4].

Knapp, et al. has reported in 2011 that the effort of de-institutionalization must be done right with the cooperation of multiple agencies. By having a well-developed system in the community setting, the overall cost of treatment can be vastly reduced. Otherwise, it would just be the same as diverting the cost to other organizations.

In this study we hope to address the issue of high Bed Occupancy Rate (BOR) in HMBP. We gather data of the common reasons for patient admission to chronic wards and find which ones are associated to patient having difficulty to be discharged home. Among those reasons, we would also be looking at the illness perspective, whereby does the severity of their illness play a role? With that information, we hope to develop a solution to the issue [5].

To assess the severity of a psychiatric illness, we chose the Brief Psychiatry Rating Scale (BPRS) version 4.0 as it is a validated widely used clinician rated assessment tool with good validity and reliability.

The BPRS is a widely used measurement instrument to assess the changes in severity in psychopathology in a wide variety of severe psychiatric disorders, such as schizophrenia, depression and bipolar disorders which are found to be common diagnoses in the chronic wards. The BPRS version 4.0 includes an expanded

twenty-four items, which also cover the observed behavior and appearance assessment during interview [6].

## *Objective*

The aim of the audit is to look for ways to reduce BOR of chronic wards. At the same time, we wish to identify the common reasons of long inpatient stay in wards in HMBP so that we can strategize our approach more effectively.

Any recommendation would be based on standards of care compliance to:

- Psychiatric and mental health services operational policy (Nov 2011), Ministry of Health Malaysia (MHM): Section 6.2, inpatient services and section 6.4 hospital based community psychiatry.
- Mental health act 2001 and mental health regulation 2010.
- Mentari MOH implementation guideline 2<sup>nd</sup> edition 2020.

A team of auditors carried out a retrospective audit looking at numbers and reasons of all inpatients that are staying longer than 3 months in hospital Mesra Bukit Padang by the time of the audit. All patients who are admitted for more than 3 months are included in the study, while excluding those who are detained under the court order CPC section 342, 344 and 348.

## **Results and Discussion**

Data collection was by a team of medical officers by looking through patients' clinical notes, administering a rating scale and filling up a data collection form. Relevant data to be collected are:

- Basic demographic information
- Total length of stay in ward
- Medical conditions: Underlying illnesses
- Psychiatric condition
- Dependency of Activities in Daily Living (ADL)
- Reasons of keeping patient in ward: Medical/Psychiatric/Social
- Brief Psychiatric Rating Scale (BPRS)

Additional data of Bed Occupancy Rate (BOR) and Average Length of Stay (ALOS) of chronic wards (Ward 4, 5, 9 and 10) are collected by looking back at the ward census.

This study's data collection period lasted from May 15, 2023, to June 30, 2023. The sociodemographic data was analyzed and described using descriptive statistics such as frequency, percentage, mean and standard deviation using IBM SPSS version 28.0. To facilitate analysis, categorical variables were transformed into dummy variables. The variables are checked for normal distribution. Associations between the variables are analyzed by using

Man-Whitney-U test and correlations between numerical data are analyzed using linear regression model.

A total of 60 patients are recruited in this study by sampling all patients that fit the criteria in all chronic wards. Relevant data are extracted from their clinical notes and their psychiatric conditions are assessed by administering BPRS cross sectionally shown in Table 1. The findings are tabulated as below:

**Table 1.** Relevant data are extracted from their clinical notes.

Variables	N=60		Mean (sd)	P-value
	Yes (%)	No (%)		
Length of stay in ward (days)			2078.50 (5281) <sup>*</sup>	
Age (years)			55.06 (12.17)	
Number of comorbidities			2 (2) <sup>*</sup>	0.209 <sup>a</sup>
ADL dependent	2 (3.3)	54 (90.0)	-	0.657 <sup>a</sup>
Primary diagnosis				0.649 <sup>a</sup>
Schizophrenia	55 (91.7)	5 (8.3)	-	
Dementia	3 (5.0)	57 (95.0)	-	
Major depressive disorder	1 (1.7)	59 (98.3)	-	
Schizoaffective disorder	1 (1.7)	59 (98.3)	-	
<b>Reasons of keeping patients</b>				
Medical illness requiring inpatient care	2 (3.3)	58 (96.7)	-	
Maintenance ECT	6 (10.0)	54 (90.0)	-	
Psychiatrically unstable	9 (15.0)	51 (85.0)	-	
Optimization of psychotropic (Clozapine)	3 (5.0)	57 (95.0)	-	
Family uncontactable	21 (35.0)	39 (65.0)	-	
Family refuse to take patient	24 (40.0)	36 (60.0)	-	
Awaiting nursing home	6 (10.0)	54 (90.0)	-	
Other social issues	8 (13.3)	52 (86.7)	-	
BPRS score			27.10(3.48)	
<b>Note:</b> <sup>*</sup> Median (IQR), <sup>a</sup> Man-Whitney-U test, <sup>b</sup> Spearman's correlation's regression model				

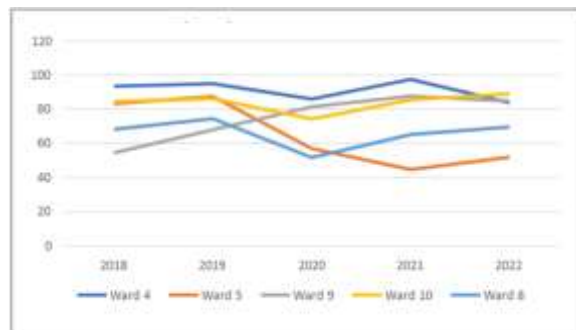
We use the length of stay in ward as an outcome variable. Schizophrenia is the most common diagnosis among chronic inpatients (91.7%). Social reasons are the highest frequency: Family refuses to take patient (40%), family uncontactable (35%), awaiting nursing home (10%) and other social issues (13.3%). There is noted significant association between maintenance ECT and length of stay in ward (P value=0.022). Thus, we can say that the treatment of maintenance ECT is associated with longer patient stay in the ward. There is slight significance noted between family uncontactable and length of stay in ward (P value=0.049). There is an association between family

uncontactable and increment of length of stay in ward [7].

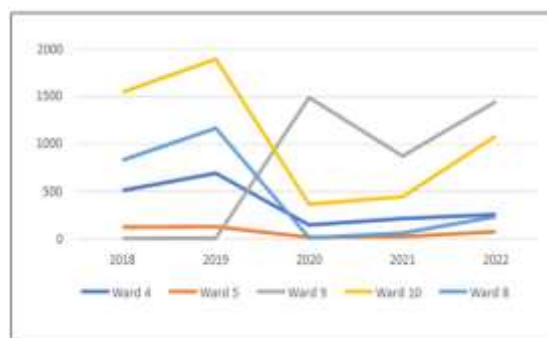
There is no association between reasons of primary diagnosis, medical illness requiring inpatient's care, psychiatrically unstable, optimization of psychotropic (Clozapine), family refuse to take patient, awaiting nursing home, other social issues and the length of stay in ward. There is no correlation between the length of stay in ward with patients' BPRS score, (Spearman's  $\rho=0.004$ ,  $P=0.487$ ). So, there is no association between patient's severity of illness and length of stay in ward (Table 2, Figures 1 and 2). The admission data in chronic wards are as follows:

**Table 2.** Bed Occupancy Rate (BOR) of chronic wards in HMBP (%).

Year	Gender	2018	2019	2020	2021	2022
<b>Ward 4</b>	M	93.54	95.11	86.11	97.54	83.88
<b>Ward 5</b>	F	83.42	87.62	57.11	44.84	52.08
<b>Ward 9</b>	F	54.63	68.09	81.59	87.78	84.93
<b>Ward 10</b>	M	84.61	86.34	74.4	85.68	89.14
<b>Ward 8</b>	M	68.3	74.58	51.81	65.29	69.69



**Figure 1.** Bed occupancy rate of chronic wards in HMBP.



**Figure 2.** Average length of stay+TRF of chronic wards.

The BOR of chronic words is as shown above. It shows that aside from ward 5, all other wards are static in numbers of patients in ward. Do note that there is a movement of patients between ward 8, ward 5 and ward 9 due to the conversion of roles of wards between them in year 2020. That may contribute to the changes. Ward 9, 10 and 5 have the highest BOR, which on average 84% for Ward 9 and 10 and 91% for ward 5. (Ward 9 serves as chronic female ward since 2020, the average BOR for past 3 years is 84%) [8,9].

The Average Length of Stay (ALOS) of patients in chronic wards shows a steady climb across the graph for the past 3 years. The steep changes in 2019 may be due to the movement of patients between wards as the ward switch their roles. The high ALOS in ward 9 and 10 is expected as those are female and male chronic wards for the elderly, which most their patients are of exceptionally long stay and difficult to discharge (Table 3).

**Table 3:** Bed Occupancy Rate (BOR) of chronic wards in HMBP (%).

Year	Gender	2018	2019	2020	2021	2022
Ward 4	M	512.15	694.27	152.08	217.98	262.43
Ward 5	F	130.49	133.25	22.57	30.31	82.37
Ward 9	F	11.94	12.55	1489	873.82	1446.67
Ward 10	M	1544.17	1890.8	370.32	446.76	1084.56
Ward 8	M	831	1166.71	16.59*	67.44*	238.47*

The association of maintenance ECT and length of stay in ward is evident, as maintenance ECT requires patient to come to HMBP as frequent as weekly for the treatment and there are no hospitals within the cluster to offer such service yet. Such treatment frequency brings expected logistic issues, especially for those who live far away in other cities. There is a need for more centers offering this service to bring it closer to the people. However, before such step even become feasible, more psychiatry units need to be established first, which will require resources in all forms [10].

The reason of ‘family uncontactable’ being associated with length of stay in ward can be justified by the non-existence of any social support available for these patients. Different than those of ‘family refused to take patient’ who still has family member around for the hospital staffs to engage with, these patients have no one for the hospital staffs to contact with. There is also no agency that would provide accommodation for them because of the lack of a legal confidant. Thus, the increment of their length of stay in ward is almost inevitable [11].

One issue worth highlighting is that there is no association noted between the severity of illness

(BPRS score) and the length of stay. This supports the notion that severity of their psychiatric illness has no influence on their length of stay in ward. Some patients in chronic wards are psychiatrically stable but stay longer than others. This is not cost effective as there are better ways to help such patients to be independent in the community, while conserving our hospital resources for those who need it more. Such strategies will be discussed below.

Social reasons are the most common reason for patients unable to be discharged from HMBP. The data shows a discrepancy in between the reasons frequency (%) and their significance of association (P-value). Such discrepancy suggests that there are more patients with reasons that without significance are being kept longer in chronic ward. Urgency is needed to address this issue due to the impact it can have on our psychiatry service, such as budgeting, facility usage and service quality. Although it is a common issue found in all mental institutions in Malaysia, it is worth reminding ourselves that it is a preventable matter [12].

The reluctance of family members to bring the patients home suggests stigmatization. The lack of understanding and stigma from family

members are main contributing factors for them to become reluctant to care for their loved ones at home. The effort to engage with the families has been done with the help of social workers, by repeating phone calls and family tracing but there is no improvement in the BOR [13]. Although addressing stigmatization objectively will require another research, the authors hope to include this topic in discussion to look for possible countermeasures for this serious phenomenon. Another issue of concern is the costs of in-patient care. Based on monthly report by finance unit, for April 2023, HMBP has recorded total admission of 4582 patient days. For the cost of inpatient treatment alone, HMBP spends a total of RM 2.7 million in just a month. This number, when compared to outpatient costs, which is RM 280,000 for 1,660 patients in April 2023, an almost difference of 10 fold is observed [14]. Considering that there are patients who are psychiatrically stable, who do not require active psychiatric intervention and just for continuation of medication, such costs of inpatient care may not be cost effective in the service.

### **Recommendation**

There is always a concern of patients being unwell when they are discharged without a caretaker. So, mental institutions adopted the concept of having chronic wards for rehabilitation purpose. With the increment of needs for accommodating the mentally ill who are having social difficulties, much effort has done to expand the infrastructure as we seen in other centers such as hospital Permai and Bahagia. The option of expansion of chronic wards is although doable, but not cost effective. By allowing more psychiatric patients to stay in ward, it requires more budgets to sustain their inpatient care, be it resources of workforce, medical equipment and daily needs like food and utilities. With the expansion of available services and subspecialties, the national budget should be well spent on enhancing the quality of care towards our patients.

Many countries, including WHO, have proposed the idea of de-institutionalization since more than 50 years ago. However, there are mixed reports regarding its outcome, as each report offers different perspectives: clinical, socioeconomical and ethical points of view. However, it consistently shows that with a good well planned community strategy, much benefit can be gained even from the socioeconomical

point of view (Knapp, et al., 2010). Based on a systemic review by McPherson et al in 2018, there is a noted benefits in supported accommodation that it improved appropriate use of service and reduction in hospitalization among de-institutionalized patients. Thus, we propose a program of supported accommodation, with Hospital Permai Johor Bahru as a reference point.

Hospital Permai has implemented supported accommodation for patients who are deemed psychiatrically stable and fit to live by themselves. As compared to the inpatient chronic residency, which consist of having patients under hospital care staying inside an apartment built within hospital grounds, supported accommodation involves patient living in accommodation units outside the hospital, which premises mostly are given by local authorities who support the program. Patients are required to work, often by supported employment, to pay for their rent (amount about RM70) and daily expenses. The community psychiatry team would visit them regularly to check on their progress and support the local communities by giving out education in order to help to reduce stigma towards the patient. So far, as when this report is written, seventeen patients in HPJB chronic wards were successfully gone through the program, sustaining themselves with a job within the community. One strategy currently underway is to transfer chronic patients who require constant medical care and psychiatrically stable to the district hospital as lodgers. This is done out of the need of bed vacancy and it is not cost effective as other hospitals too will share the cost burden.

Another strategy is to lower the admission rates altogether, by improving our service. A stronger therapeutic alliance is needed between clinician and the family members. Psychoeducation is important in reducing stigmatization. Study has shown that it improves the long-term outcome among patients of schizophrenia, by having a reduction of relapse rate of 50-60% (McFarlane, 2016). We suggest implementing a structured psychoeducation module for the patients and family. The Ministry of health provided a structured psychoeducation module for family and patients, which comprises 8 components.

However, there is a constant need for resources to have the facility and staff to routinely administer such modules effectively. There is a need to establish more treatment centers

available within the area. Treatment gap refers to the difference between those who require treatment and those who got treated. In psychiatry, it has known to be a worldwide issue as there are huge difficulty for the mentally ill to get the help they need. Such difficulty will bring delay in treatment, resulting in adverse outcome. With a wide area of coverage handled by HMBP, it receives psychiatry patients with the need of admission from areas from Beaufort all the way to Kudat (Distance of 400 km). Out of the cluster's hospitals, there's only HMBP who are equipped with psychiatry ward at the moment of this report. So, much urgency is needed to have other centers within the cluster to be equipped with psychiatry units, to reduce the patient load in HMBP.

Approaches like community outreach are also important in reducing the need for psychiatric admission. A recent study done in Kuala Lumpur has shown that a good outreach strategy could reduce patient readmission rate. Community outreach encompasses mental health promotion to the public, educating primary caregivers, preparing the public health sector the skills needed to identify the illnesses, as well as working with different agencies to provide support to those who are affected. Such an approach has been implemented in HMBP, which is having a community mental health center focusing on rehabilitation called 'Mentari.' Mentari program has been implemented in the national practice since The Eleventh Malaysia Plan (EMP-2016-2020). The aim is to have a community center that focuses on rehabilitation of the mentally ill and reduce the illness burden, by giving out supported employment, psychosocial rehabilitation, sheltered workshop, home visit and social enterprise. It is also focused on reducing stigma within the community. However, as of now, only one Mentari center is available on the west coast of Sabah and it is stationed within HMBP ground. The team urges the need to establish more community mental health centers.

Good alliances with other agencies are important as well. There is a need to clarify that with de-institutionalization, the economic burden for patients with great disability will be shared between agencies such as healthcare, social welfare, as well as families. So, there must be a good collaboration between agencies to achieve cost effectiveness. Hospital social welfare that are engaging with the family members are facing difficulty due to lacking resources. The options

presented for them are limited, as financial aid and supported accommodations options are scarce and nursing homes are mostly run by the private sectors or NGO, thus incurring a demand in price to the families. We suggest a frequent discussion with the state social welfare and NGOs to discuss a means of collaboration to maximize each other's role in service.

### **Conclusion**

- Social factors are the most common reason for chronic inpatient stay in HMBP.
- Severity of psychiatric illness is not associated with the length of stay of chronic inpatients.
- Cost efficiency demands steps to be taken to reduce the inpatient load, such as: Implementation of psychoeducation module; establishing new Mentari centers and outreach strategies.
- Supported accommodation.

### **Limitations**

The author acknowledges that assessment towards the caregiver's perspective such as their stigmatization would provide a more concrete data, but there's a difficulty in engaging family members of patients in chronic wards as they are usually difficult to meet with clinicians. There might exist an inter rater variability when administering BPRS by different clinicians. A brief meeting and teaching have been conducted between the clinicians and they are instructed to comply with the BPRS manual. The recommendations are for reference purposes for the hospital administrators as the author is not stationed on site.

### **Acknowledgement**

The Authors would like to thank Hospital Mesra Bukit Padang for allowing the audit to be taken place and the cooperation from the admin and staff during the audit period.

### **Declaration of Interest**

The authors declare that there is no conflict of interest regarding the publication of this article. This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors. This audit receives no funding or sponsors from any party.

### **Ethical Issues**

The project is pending approval from the Malaysia Research Ethical Committee (MREC) approval.

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**Received:** 28 November 2023, Manuscript No. AJOPY-23-121468; **Editor assigned:** 01 December 2023, PreQC No. AJOPY-23-121468 (PQ); **Reviewed:** 15 December 2023, QC No AJOPY-23-121468; **Revised:** 18 December 2023, Manuscript No. AJOPY-23-121468 (R); **Published:** 02 January 2024, DOI: 10.54615/2231-7805.47338