



## PATTERN OF INPATIENT ADMISSION IN PSYCHIATRY WARD AFTER COVID-19 LOCKDOWN AT A TERTIARY CARE CENTER OF ASSAM

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**ABSTRACT** **Aim of the study:** The aim is to review the admission pattern, demographic profile and clinical characteristics of the patients admitted in Psychiatry ward during the lockdown phase following Covid-19 pandemic.

**Material and methods:** A cross-sectional, observational study was undertaken in the Department of Psychiatry, Gauhati Medical College Hospital, Guwahati, Assam, India for six months extending from 24<sup>th</sup> March 2020 to 23<sup>rd</sup> September 2020. Data were collected retrospectively from case history sheet and a semi-structured proforma is used to collect the socio-demographic and clinical variables. Diagnosis was made using ICD-10. The analyses of data were done using descriptive statistics.

**Results:** A total of 144 patients were admitted during the study period. Out of total admitted patients maximum were admitted on the third month and least in the month immediately following lockdown. Admission was more in young adults, men and in those from urban locality. More patients were diagnosed in the category F20-29 followed by F30-39, majority were admitted for relapse of previous symptoms and duration of hospital stay was less than 10 days for half of the admitted patients.

**Conclusion:** To tackle emergencies during a pandemic, the most crucial step is proper planning. Evaluation of data regarding inpatient admission in a psychiatry ward during pandemic will help in overcoming the discrepancies and guide in future planning for mental health care during any emergency situation.

**KEYWORDS :** Covid-19, lockdown, inpatient, psychiatry

### INTRODUCTION

The viral pandemic due to COVID-19 emerged as a threat to worldwide, in every aspect of human life. The novel virus named COVID 19 causing severe acute respiratory syndrome (SARS) was first reported to WHO in December 2019 from the Wuhan province of China. (Cucinotta & Vanelli, 2020) India reported the first case in 30<sup>th</sup> January. (Andrews et al., 2020) Eventually the World Health Organization (WHO) declared COVID-19 as a pandemic on March 11, 2020. (Cucinotta & Vanelli, 2020) Different countries around the world started to implement various measures to contain the rapidly spreading infection like social distancing, wearing a mask, closing educational institutions, workplace and market-place.

The Indian government also implemented social distancing rules and complete lockdown, starting from 24<sup>th</sup> March 2020 midnight. (Lancet, 2020) Following this in the subsequent phases of extended lockdown some conditional relaxations were made. Lockdown was a preventive and emergency strategy to decrease the sharp rise in spread of infection. Though it was an effective strategy and need of the hour, it had its own merits and demerits. It was found in studies that lockdown along with the pandemic had increased rates of persons suffering from common mental disorders. (Roy et al., 2020) The effect of Covid19 had already burdened the health system drastically in relation to infrastructure, resources and investment. Lockdown also is hypothesized to affect the profile of patients suffering from mental illness requiring inpatient admission.

This is an observational study with the aim to assess the admission pattern, demographic profile and clinical characteristics including length of hospital stay of the patients during the lockdown phase.

### MATERIALS & METHODS

#### STUDY DESIGN

A type of retrospective cross-sectional observational study was undertaken.

#### Setting

The study was carried out in the Department of Psychiatry, Gauhati Medical College Hospital (GMCH), Guwahati, Assam, India during the period of lockdown for six months from 24<sup>th</sup> March 2020 to 23<sup>rd</sup> September 2020.

#### Participants

All the patients admitted during the study period in department of psychiatry from OPD and emergency/casualty department of GMCH were included in the study. According to standard operating protocol of

institutional COVID committee all patients requiring hospital admission were to be tested for COVID 19 before admission.

#### Variables

A semi structured proforma was used to assess the socio-demographic variables like age, gender and locality; clinical variables like diagnosis, episode of illness and length of hospital stay. Diagnosis was made by senior consultants of Department of Psychiatry, GMCH according to tenth revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10). (Organization, 1993)

#### Data sources

Data were collected retrospectively from inpatient case history sheets for a period of 6 months from 24<sup>th</sup> March 2020 to 23<sup>rd</sup> September 2020. Participant data were then entered in the semi-structured proforma developed in the Department of Psychiatry, GMCH.

### STATISTICAL METHODS

Microsoft excel was used to collect the data and descriptive analysis like frequency and percentages are used to represent the data.

### RESULTS

**Participants-** A total of 144 patients were admitted Department of Psychiatry, GMCH after lockdown was declared from 24<sup>th</sup> March to 23<sup>rd</sup> September 2020.

**Fig-1:**

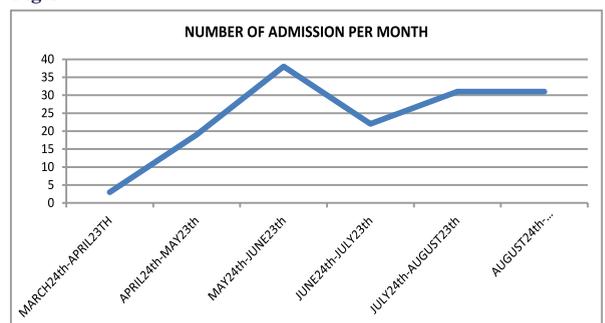


Fig-1 shows frequency of hospital admissions per month. Admission rate was highest in the 3rd month from 24<sup>th</sup> May-23<sup>rd</sup> June with 38 admissions and lowest with 3 admissions immediately the month (24<sup>th</sup> March-23<sup>rd</sup> April) following lockdown.

**Table-1:**

AGE GROUP	FREQUENCY	PERCENTAGE
1-10	4	2.78%
11-20	25	17.36%
21-30	51	35.42%
31-40	33	22.91%
41-50	14	9.72%
51-60	11	7.64%
61-70	4	2.78%
71-80	2	1.39%
GENDER	MALE	
	107	74.31%
	FEMALE	
	37	25.69%
LOCALITY	URBAN	
	110	76.39%
	RURAL	
	34	23.61%

Table 1 shows the socio-demographic profile of the admitted patients. Fifty one patients(35.42%) belonged to the age group of 21-30years followed by thirty three(22.91%), twenty five(17.36%), fourteen(9.72 %), eleven(7.64%)respectively in age group 31-40years, 11-20years, 41-50years and four(2.78%) in each 1-10years, 61-70years, two(1.39%) in 71-80years age group. Out of total 144 patients; there were 107(74.31%) male and 37(25.69%) female. There were 110(76.39%) patients from urban and 38(23.61%) patients belonging to rural areas.

**Table-2:**

DIAGNOSIS	FREQUENCY	PERCENTAGE
F00-F09	5	3.47%
F10-F19	37	25.69%
F20-F29	44	30.56%
F30-F39	38	26.39%
F40-F49	16	11.2%
F70-79	1	.69%
F90-F99	3	2.09%
No. of Days of hospital stay		
0-10	72	50%
11-20	56	38.89%
21-30	11	7.64%
31-40	5	3.47%
Prior diagnosis		
First episode	51	35.42%
Relapse	93	64.58%

Table 2 shows the clinical profile of 144 admitted patients. Forty four patients were diagnosed in the category F20-29(30.56%), thirty eight in F30-39(26.39%), thirty seven in F10-19(25.69%), sixteen in F40-49(11.2%), five in F00-09(3.47%), three in F90-99(2.09%) and one in F70-79(0.69%) according to ICD 10 diagnostic criteria. Out of 144 patients, 93(64.58%) patients were previously diagnosed cases of psychiatric illness admitted for relapse and 51(35.42%) were newly diagnosed and drug naïve patients. The duration of hospital stay was short (0-10days) for seventy two patient (50%), fifty six (38.89%) stayed for 11-20 days, eleven (7.64%) for 21-30days and five (3.47%) for 31-40 days.

## DISCUSSION

In our study the total number of admitted patients is 144 in 6month period from 24<sup>th</sup> March to 23<sup>rd</sup> September 2020, which is 27.32% less compared to 527 patients admitted in psychiatry ward, GMCH from 24<sup>th</sup> March 2019 to 23<sup>rd</sup> September 2019. Similar results were elicited in studies across the world.(Clerici et al., n.d.)(Capuzzi et al., 2020)(Pignon et al., 2020)(Carrasco et al., 2020)(Beghi et al., 2020)(Tromans et al., 2020)(Gómez-Ramiro et al., 2021) The reason for a decreased number of admitted cases is due to nationwide lockdown declared by Government of India due to COVID-19 pandemic which posed a restriction in transportation along with some changes in hospital admission policy. Public compliance with the guidelines and utilization of tele-psychiatry services as initiated by the Assam government also may be a reason of decrease in inpatient admission. Tele-psychiatry services were found to be a boon during the pandemic as evidenced by different studies across the world.(Shore et al., 2020)(Farabee et al., 2016) The highest admission was in 3<sup>rd</sup> month

following lockdown with a total of thirty eight patients and lowest with three patients in the month immediately following lockdown. The tertiary hospitals of Assam were converted to dedicated Covid-19 hospital with limited acute emergency services immediately after lockdown; later on as Covid Care Centers were built the admission policies changed which is the possible explanation in this regard.

The most affected age group is 21-30 years age group with fifty one (35.42%) patients and the least is two (1.38%) patients in the age group 71-80 years. In contrast to this finding, studies found the mean age of the patients admitted during lockdown to be in forties. People in older age groups usually present with multiple ailments and the fear of getting infected with Covid-19 and its adverse consequences might restrict their hospital visit. In our study 107(74.31%) patients were males out of total 144. Contrary to this finding studies have not reported any significant difference in gender.(Itrat et al., 2020)(Carrasco et al., 2020) Majority of patients admitted belong to urban locality (110) which can be explained due to lockdown itself causing restriction in transportation.

In the clinical profile one important finding is that forty four (30.56%) patients of the patients were diagnosed with the category F20-29 (Schizophrenia, Schizotypal and Delusional disorder) which constitutes highest among the admitted patients. Hospitalization in patients diagnosed as psychotic disorders are mostly involuntary. During lockdown although the voluntary admission rate decreased than before the involuntary admissions were comparable.(Clerici et al., n.d.)(Gómez-Ramiro et al., 2021) Similar findings were noticed in studies conducted in other parts of world.(Abbas et al., 2020)(Carrasco et al., 2020) In contrary some studies found increased in admission for problems with substance use disorders(Carrasco et al., 2020)(Itrat et al., 2020) and anxiety spectrum disorders.(Clerici et al., n.d.) Out of 144, ninety three (64.58%) patients were admitted for relapse compared to fifty one (35.42%) newly diagnosed cases. Studies across the world has found persons with mental illness are more affected than general population during lockdown which justifies the above finding.(Chatterjee et al., 2020) Another finding in our study was that a total of seventy two (50%) patients were discharged within 10 days of admission and fifty six (38.89%) patients within 20 days. The short duration of hospital stay can be related changed norms of admission and discharge in hospitals during lockdown.

## Limitations

The study was conducted in a tertiary care hospital so results couldn't be generalized. The changed admission and discharge policies during lockdown had a great impact on admission pattern. Patients admitted in Covid-19 wards and ICU with psychiatric illness was not taken into consideration. Patients shifted to Covid-19 ward after being tested positive during hospitalization were not taken into account.

## CONCLUSION

The pattern of inpatient admission in psychiatry ward during the pandemic will highlight the areas requiring attention in any crises. The findings of the study will guide district mental health programs to tackle emergencies during crisis period, to decrease the sufferings of patients, caregivers and also the burden of a tertiary care centre. The evaluation of these data will help in planning proper measures to curtail the discrepancies during emergency situation in near future.

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**Conflicts of interest-** There are no conflicts of interest

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