

## Physical Illness in Admissible Psychiatric Patients in a Tertiary Inpatient Facility

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### Abstract

**Background:** Clinical screening of patients being presented for admission to a tertiary care psychiatric inpatients facility is important to ensure safe, timely, and effective treatment.

**Aim:** To determine the demographic and clinical characteristics associated with admissible severe psychiatric patients and who required transfer to higher medical-surgical units; and to develop a system of care that bridges existing gaps between the mental and general health communities.

**Methods:** Data of 1026 consecutive admissible severe psychiatric patients and two months follow up data of consecutive 930 admitted patients were documented. The data of 12 patients transferred within next two months of indoor treatment were evaluated to categorize the reasons for transfers.

**Results:** Ninety six admissible patients (9.35%) before admission and twelve admitted patients (1.17%) during their hospital stay required transfer to a medical-surgical unit. Reasons for transfer before admission included lower respiratory tract infection (2.83%), anemia (2.24%), tuberculosis (1.56%), and cardiovascular diseases (1.36). Medical factors associated with rapid transfer out of the inpatient unit were chest pain, shortness of breath, electrolyte abnormalities, signs of infection, and changes in the level of consciousness.

**Conclusion:** Inappropriate psychiatric admissions may be avoided by more vigilant screening for some physical diseases.

**Keywords:** Physical illness; Psychiatric admission; Physical comorbidity; Preadmission investigation

### Introduction

Recently, there has been a renewed interest in better managing the complex relationships that exist between mental and physical illness. People with psychiatric disorders have an increased rate of morbidity and mortality due to physical illness. Literature shows nearly 45% of psychiatric patients had an active, significant physical disease with only 47% of these recognized by the mental health care providers. For elderly psychiatric patients, those with organic brain syndromes, patients who are substance abusers, women, and patients of lower socio-economic status, the risk of concomitant physical illness is even more significant [1-3]. The excess mortality associated with mental illness has been extensively documented in literature [4]. The risk of excess mortality is generally due to physical illnesses, such as cardiovascular disease, respiratory disease, and cancer rather than the psychiatric illness [5,6]. Persons with serious psychiatric disorders are prone to many different physical illnesses. While these diseases are also prevalent in the general population, their impact on individuals with serious psychiatric disorders is significantly greater [7,8].

Clinical screening of patients being presented for admission to the psychiatric department is important to ensure safe, timely, and effective treatment [9,10]. If an admissible patient's condition exceeds the psychiatric department's clinical capabilities for severe medical or surgical conditions, he or she must be transferred to the appropriate medical or surgical unit of nearby medical college [11]. Initial transfer to appropriate medical-surgical facilities can lead us to avoid risk of disease chronicity or death. Alternatively, the serious medico-surgical disease may develop after the admission to the psychiatric department which may enhance mortality and morbidity.

There is a paucity of literature especially from developing countries concerning the prevalence of physical illnesses in psychiatric patients and what admission policy can reduce morbidity and mortality due to physical illness in psychiatric unit. In view of the foregoing this study was undertaken to determine the demographic and clinical characteristics associated with admissible severe psychiatric patients transferred from outpatient department of Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS) to higher medical-surgical units before admission and also within two months of indoor stay and to develop a system of care that bridges existing gaps between the mental and general health communities.

### Methods

Psychiatric department of RINPAS, a tertiary care Psychiatry Institute of India, is able to care for inpatient psychiatric disorders with minor medical-surgical disorders. All the subjects attended at psychiatric outpatient department between July 2007 and December

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2007 were initially assessed by the psychiatrists to establish a psychiatric diagnosis (as per ICD10 criteria) [12] and the need of admission. They identified those who had severe psychiatric disorders and required inpatient treatment. Out of them 1026 patients (N=1026) were selected for the study (excluding patients with substance dependence syndrome without other psychiatric co-morbidities). Four patients were not included in the sample because their identity was unknown. As per hospital policy all the admissible patients underwent through medical examination by the physician posted in same outpatient department. Thereafter they underwent routine tests like haemogram, urine routine examination, blood urea, serum creatinine, serum bilirubin, serum electrolytes, ECG, chest X-ray, HIV I and II and pregnancy test (for female patients), and specific investigations if required. Based on the physical examination and investigation results out of 1026 admissible patients, 930 (90.65%) patients (n<sub>1</sub>=930) were admitted and 96 (9.35%) patients (n<sub>2</sub>=96) were found to have associated serious physical illnesses which required immediate specialist medical or surgical attention. The physician and psychiatrist jointly decided to refer those 96 patients to nearby medical college.

Data collected for each transferred patient were the following: age, gender, marital status, occupation, education, family type, referral source, psychiatric diagnosis, and medical diagnosis requiring transfer. The major physical illnesses we documented were lower respiratory tract infection (L-RTI), anemia, active tuberculosis, cardiac diseases, and other severe physical illness. Anemia was defined as venous blood hemoglobin level below 10 gm/dl [13]. The cardiac diseases included ischemic heart disease, left heart failure and uncompensated right heart failure, conduction problems, and arrhythmia. Likewise, other severe physical illness included recent fracture of long bones, burn injury, lacerated wound, ophthalmological injury, severe arthritic complications and acute exaggeration of chronic bronchial asthma. We also followed up the admitted patients (n<sub>1</sub>=930) and collected data from those who developed serious physical illness within next two months of admission. But we could not follow up those who were transferred before admission (n<sub>2</sub>=96).

## Results

The majority of the admissible psychiatric patients with serious physical illness (n<sub>2</sub>=96) was married (71%), male (72%), referred from rural areas (either by local physicians or family members) of Jharkhand (79%) and belonging to joint family (60%) (Table 1). The age range of the subjects was 18-52 years (30.24 ± 9.91 years). They were mostly illiterate (37%) and farmer (52%) by profession.

Among the seriously physically ill patients (n<sub>2</sub>=96) 54 (56%) patients were of Schizophrenia group and included schizophrenia 36%, acute and transient psychotic disorder 1%, schizoaffective Disorder 6% and other non-organic Psychosis 12.5%. Patients with affective disorders (comprised of manic episode 1% and bipolar affective disorder 43%) made up 42 (44%) out of 96 seriously physically ill. Only 5 patients were diagnosed as having co-morbid substance dependence. One patient from 'schizophrenia' group was having co-morbid cannabis dependence and another one having alcohol dependence. Similarly in 'affective disorder' group, two patients were suffering from cannabis dependence and another one from alcohol dependence.

The common serious physical illnesses among the admissible psychiatric patients (N=1026) were lower RTI (2.83%), anemia (2.24%), tuberculosis (1.56%), cardiac diseases (1.36%), and other severe physical illness (1.56%). Diabetes mellitus were detected in 0.58% patients and HIV in 0.29% patients (Table 2). Among 6 patients of Diabetes mellitus

Variable		N	%
Sex	Male	69	72
	Female	27	28
Education	Illiterate	35	37
	Primary	10	11
	Middle	16	17
	Matriculation	6	6
	Intermediate	14	15
	Graduate	13	14
Family	Nuclear	33	35
	Joint	58	62
	Others	3	3
Occupation	Farmer	50	53
	Housewife	25	27
	Unemployed	16	17
	Others	3	3
Marital status	Married	68	72
	Unmarried	24	26
	Others	2	2

**Table 1:** Socio-demographic profile of the admissible psychiatric patients with comorbid physical illness (n=96).

5 were suffering from bipolar affective disorder. Two out of the three HIV positive patients were from 'affective disorder' group. Some patients had more than one diagnosis. Most common serious physical illness in schizophrenia (F20) (31.43%) and bipolar affective disorder (F31) (21.95%) patients was anemia and lower RTI.

A total 12 (1.29%) admitted patients (n<sub>1</sub>=930) developed serious physical illness within 7 days of admission and 7 out of 12 died. The major reasons for transfer were chest pain, shortness of breath, electrolyte abnormalities (specifically sodium or potassium), signs of infection (fever, leucocytosis), and changes in the baseline level of consciousness. Only three (i.e. one-fourth) of these had pre-existing diseases (one of them was having renal disease and rest two were having ischemic heart disease).

## Discussion

This prospective hospital-based study attempted to assess the demographic and clinical characteristics associated with admissible severe psychiatric patients transferred from outpatient department of RINPAS to medical-surgical units and to formulate potential strategy to improve patient care and admission screening.

The findings of this study have implications for clinical practice. In this study, a total of 9.35% of the psychiatric outpatients in need of inpatient management were found to have serious physical illnesses. Other authors have also reported similar [14,15] or even higher [16-19] rates of prevalence of physical illnesses in psychiatric patients in a variety of settings. All the subjects had previously undiagnosed physical illnesses and only after routine investigations those medico-surgical illnesses were detected. Another study found that 41.3% of psychiatric patients had a medical problem and 65% of the diagnoses were previously unsuspected. This higher frequency of medical illness was because of inclusion of even minor medical problems in that study [20]. This is an alarming issue and many authors have raised concerns about the under-diagnosis of physical illnesses in psychiatric patients [21,22]. Some major physical illnesses detected in the current study were lower respiratory infection (30%), anemia (24%), tuberculosis (17%), and cardiac illness (15%). Miller et al., in their study found that cardiac diseases (21%) were the leading cause of death [23].

	Anemia n (%)	Tuberculosis n (%)	LRTI n (%)	Cardiac Diseases n (%)	Diabetes Mellitus n (%)	HIV n (%)	Others n (%)
<b>Total (%<sup>1</sup>)</b>	23 (2.24)	16 (1.56)	29 (2.83)	14 (1.36)	6 (0.58)	3 (0.29)	16 (1.56)
<b>%<sup>2</sup></b>	23.95	17	30.2	14.58	6	3.12	17
<b>Bipolar Affective Disorder, (N=41)</b>	9 (21.95)	7 (17.07)	9 (21.95)	7 (17.07)	5 (12.2)	1 (2.44)	8 (19.5)
<b>Manic Episode, (N=1)</b>						1 (100)	
<b>Other Non-organic Psychosis, (N=12)</b>	3 (25)	1 (8.33)	6 (50)	1 (8.33)			2 (16.66)
<b>Schizoaffective Disorder, (N=6)</b>		1 (16.66)	3 (50)	1 (16.66)			1 (16.66)
<b>Acute and Transient Psychotic disorder, (N=1)</b>				1 (100)			
<b>Schizophrenia, (N=35)</b>	11 (31.43)	7 (20)	11 (31.43)	4 (11.43)	1 (2.86)	1 (2.86)	5 (14.28)

%<sup>1</sup>=% of total admissible psychiatric patients (N=1026); %<sup>2</sup>=% of total admissible patients with severe physical illness (n<sub>2</sub>=96); LRTI= Lower Respiratory Tract Infection

**Table 2:** Break-up of physical illness among admissible psychiatric patients.

These co morbidities lead to significant mortality among severe mental illness, as a recent study concludes that persons with bipolar disorder died of CVD approximately 10 years earlier than the general population [24]. CVD is also considered as the commonest cause of death in patients of serious mental illness [25-27].

A retrospective study conducted to assess risk factors for latent tuberculosis infection (LTBI) suggest that, beside the infectiousness of source cases, intensity of exposure, and age of contacts, exposure to TB cases in potential genotyping clusters may be predictive for LTBI in this male psychiatric population [28].

Obesity was not the problem in our sample, but in earlier studies obesity was the one of the leading medical co-morbidity [23]. Another study found that cardio metabolic risk factors in patients with schizophrenia and related psychotic disorders were detected in 24% of the patients [29].

Review of the subject showed that 20 percent psychiatric patients had medical problems that may actually have caused or exacerbated their psychiatric condition [10,30]. For example psychiatric morbidity is reported to be quite common in patients with diabetes mellitus (DM) and most of the studies have focused on depression. Diabetes and depression share a reciprocal relationship and it is suggested that these disorders often co-exist and one acts as a risk factor for development of the other [30,31]. Thus it is likely that the physical illness may have contribution to the worsening of the psychiatric disorders on some of the admissible patients and thus their admission might have been prevented if associated physical illness had been detected and treated by peripheral healthcare provider at earlier stages of their disorder. It would save time and money for both the patient and the healthcare system.

The prevalence of HIV positivity in patients with severe psychiatric disorder is generally higher than the general population but varies substantially (1.3-23.9%) [5]. Though the prevalence of HIV positivity in the present study was low, it is important to note that in none of these patients was HIV suspected from history or examination. This finding underlines the importance of HIV screening of this high risk group of patients.

Many reasons have been postulated as to the etiology of these physical illnesses in psychiatric population. For instance, medication-induced weight gain, poor personal hygiene, reduced physical activity, the increased prevalence of smoking, increased substance use, unprotected sexual behaviour, and inadequate social support systems all are likely to contribute to the development of hypertension, diabetes mellitus, infections, chronic obstructive pulmonary disease

(COPD), heart disease, HIV and injuries [23]. Many physical disorders have been prevalent in individuals with psychiatric illnesses, which may be attributable to modifiable lifestyle factors and psychotropic medication side effects, poorer access to and quality of health care in such patients [5].

Five patients of our sample had substance dependence syndrome. These may have some contribution to their associated physical illness. So, future studies should target psychiatric disorders without co-morbid substance dependence to estimate contribution of psychiatric disorder to physical illness or vice versa. Although nicotine dependence is known to be prevalent among patients with mental illness, our medical records did not typically include this diagnosis during the years of our study. Severe depression is another common admissible psychiatric disorder. But we did not get those data. So, bigger sample in future can enlighten the burden of severe physical illness in this population.

It was also observed in this study that a significantly higher percentage of subjects with freshly diagnosed physical illnesses were from the less educated and low-income socioeconomic strata, although this finding may not have causative significance. It can be argued that in developing countries such as India, poverty breeds illness and finding of a significantly higher degree of physical illness in patients from a low socioeconomic status is expected.

One recent study found that 1.9% of admitted patients required transfer to medical-surgical facilities within 48 hours of admission using the system of admission screening at their Clinic [32]. In our study only 12 (1.29%) patients developed serious physical illness and only one-fourth of those were having pre-existing reasons. However, these three patients developed serious physical illness for reasons that, in retrospect, could have been avoided if key information had been relayed or reported by the accompanying persons or referring health providers. This is a low rate (0.29%) of avoidable admissions, and it suggests that the system in use for detection of physical illness prevalent at RINPAS outpatient department is effective. At the same time it remind the psychiatrists who accept admissions to a psychiatric indoor facility to be vigilant about whether all of the potentially contributory medical problems have been addressed and communicated by the referring health provider or accompanying persons.

## Limitations

In the present study, the patients were taken from a psychiatric institution service. The findings of this study cannot be generalized to the entire mentally ill patients as we considered only those patients who were in need of inpatient management. These findings need to be

confirmed by community-based studies. In our study we did not follow up the referred patients in medical college. This should be addressed in future studies.

## Conclusions

The finding of the present study emphasizes the need for psychiatrists to remain vigilant so that common physical illnesses may not remain undetected in their patients. Special attention should be paid while examining poor, less educated and unemployed persons. Improved detection and early treatment of physical illnesses in psychiatric patients will have a significant impact on their psychosocial functioning and quality of life.

## References

1. Samele C (2004) Factors leading to poor physical health in people with psychosis. *Epidemiol Psychiatr Soc* 13: 141-145.
2. Gierz M, Jeste DV (1993) Physical co-morbidity in elderly schizophrenic and depressed patients. *Am J Geriatr Psychiatr* 1: 165-170.
3. Lacro JP, Jeste DV (1994) Physical co-morbidity and polypharmacy in older psychiatric patients. *Biol Psychiatry* 36: 146-152.
4. Lawrence D, Kisely S, Pais J (2010) The epidemiology of excess mortality in people with mental illness. *Can J Psychiatry* 55:752-760.
5. DE Hert M, Correll CU, Bobes J, Cetkovich-Bakmas M, Cohen D, et al. (2011) Physical illness in patients with severe mental disorders. I. prevalence, impact of medications and disparities in healthcare. *World Psychiatry* 10:52-77.
6. Leucht S, Burkhard T, Henderson J, Maj M, Sartorius N (2007) Physical illness and schizophrenia: a review of the literature *Acta Psychiatr Scand* 116: 317-333.
7. Parks J, Svendsen D, Singer P, Foti, ME (2006) Morbidity and mortality in people with serious mental illness. Alexandria: National Association of State Mental Health Program Directors (NASMHPD) Medical Directors Council.
8. Maj M (2009) Physical health care in persons with severe mental illness: a public health and ethical priority. *World Psychiatry* 8:1-2.
9. Dickey B, Normand SLT, Weiss RD, Drake RE, Azeni H (2002) Medical morbidity, mental illness, and substance use disorders. *Psychiatr Serv* 53: 861-867.
10. Felker B, Yazel JJ, Short D (1996) Mortality and medical comorbidity among psychiatric patients: a review. *Psychiatric Services* 47: 1356-1363.
11. Carney CP, Jones L, Woolson RF (2006) Medical Comorbidity in Women and Men with Schizophrenia A Population-Based Controlled Study. *J Gen Intern Med* 21: 1133-1137.
12. World Health Organization (1992) International Statistical Classification of Diseases and Related Health Problems.
13. Sood SK, Rusia U (1986) WHO guidelines for anemia. *Ann of Nat Acad of Med Sci India* 22: 235.
14. Bunce DF 2nd, Jones LR, Badger LW, Jones SE (1982) Medical illness in psychiatric patients: Barriers to diagnosis and treatment. *South Med J* 75: 941-944.
15. Goldman LS (1999) Medical illness in patients with schizophrenia. *J Clin Psychiatry* 60: 10-15.
16. Koranyi EK (1977) Fatalities in 2070 psychiatric outpatients. *Arch Gen Psychiatry* 34: 1137-1142.
17. Fuellerton C, Florenzano R, Acuna J (2000) Co-morbidity of chronic diseases and psychiatric disorders among patients attending public primary care. *Rev Med Chile* 128: 729-734.
18. Maricle RA, Hoffman WF, Bloom JD, Faulkner LR, Keepers GA (1987) The prevalence and significance of medical illness among chronically mentally ill outpatients. *Community Ment Health J* 23: 81-90.
19. Singh GP, Chavan BS, Kaur P, Bhatia S (2006) Physical illnesses among psychiatric outpatients in a tertiary care health institution: A prospective study. *Indian J Psychiatry* 48: 52-55.
20. Summers WK, Munoz RA, Read MR, Marsh GM (1981) The psychiatric physical examination, part II: Findings in 75 unselected psychiatric patients. *J Clin Psychiatry* 42: 99-102.
21. Green AI, Canuso CM, Brenner MJ, Wojcik JD (2003) Detection and management of comorbidity in patients with schizophrenia. *Psychiatr Clin North Am* 26: 115-139.
22. Kisley SR, Goldberg DP (1997) The effect of physical ill health on the course of psychiatric disorder in general practice. *Br J Psychiatry* 170: 536-540.
23. Miller BJ, Paschall CB 3rd, Svendsen DP (2006) Mortality and medical comorbidity among patients with serious mental illness. *Psychiatr Serv* 57: 1482-1487.
24. Westman J, Hällgren J, Wahlbeck K, Erlinge D, Alfredsson L, et al. (2013) Cardiovascular mortality in bipolar disorder: a population-based cohort study in Sweden. *BMJ Open* 3: e002373.
25. Garcia-Portilla MP, Saiz PA, Bascaran MT, Martínez AS, Benabarre A, et al. (2009) Cardiovascular risk in patients with bipolar disorder. *J Affect Disord* 115: 302-208.
26. Bouza C, Lopez-Cuadrado T, Amate JM (2010) Hospital admissions due to physical disease in people with schizophrenia: a national population-based study. *Gen Hosp Psychiatry* 32: 156-163.
27. Laursen TM, Munk-Olsen T, Agerbo E, Gasse C, Mortensen PB (2009) Somatic hospital contacts, invasive cardiac procedures, and mortality from heart disease in patients with severe mental disorder. *Arch Gen Psychiatry* 66: 713-720.
28. Pan SW, Kou YR, Hu TM, Wu YC, Lee YC, et al. (2015) Assessment of latent tuberculosis infection in psychiatric inpatients: A survey after tuberculosis outbreaks. *J Microbiol Immunol Infect.*
29. Protopopova D, Masopust J, Maly R, Valis M, Bazant J (2012) The prevalence of cardiometabolic risk factors and the ten-year risk of fatal cardiovascular events in patients with schizophrenia and related psychotic disorders. *Psychiatr Danub* 24: 307-313.
30. Knol MJ, Twisk JW, Beekman AT, Heine RJ, Snoek FJ, et al. (2006) Depression as a risk factor for the onset of type 2 diabetes mellitus. A meta-analysis. *Diabetologia* 49: 837-845.
31. Nouwen A, Winkley K, Twisk J, Lloyd CE, Peyrot M, et al. (2010) Type 2 diabetes mellitus as a risk factor for the onset of depression: a systematic review and meta-analysis. *Diabetologia* 53: 2480-2486.
32. Passov V, Rundell JR (2008) Analysis of transfers from a medical-psychiatry inpatient unit to a medical-surgical unit within 48 hours of admission. *Psychosomatics* 49: 535-537.

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