

**A Retrospective Analysis of Referrals to Consultation-Liaison Psychiatry over  
a Five-Year Period in a Tertiary Hospital in South Africa**

*A Research Report to meet the requirements  
of the Master of Medicine in Psychiatry  
at the University of Cape Town*

**Bailee Jean Romburgh (candidate)**

Student Number: RMBBAI001

[baileejean@gmail.com](mailto:baileejean@gmail.com)

**0833579936**

University of Cape Town, Faculty of Health Sciences  
Division of Psychiatry and Mental Health

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Supervisor: Professor J Hoare (Division of Psychiatry, UCT)

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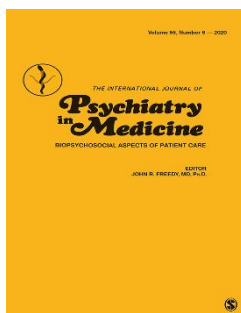
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## FORMATTING

This thesis is prepared as a publication-ready manuscript for the International Journal of Psychiatry in Medicine. Chapter two is the publication-ready section and as such it is arranged in the following order: abstract, text, acknowledgements, references, tables. The four major areas in the main text include the introduction, method, results, and discussion. The reference style is Sage Vancouver as per the author guidelines for the International Journal of Psychiatry in Medicine.

# TABLE OF CONTENTS

ABSTRACT.....	1
ACKNOWLEDGEMENTS.....	2
CHAPTER 1.....	3
BACKGROUND AND SIGNIFICANCE.....	3
REVIEW OF EXISTING LITERATURE.....	6
HYPOTHESIS.....	12
AIM.....	12
OBJECTIVES.....	13
REFERENCES.....	17
CHAPTER 2 – PUBLICATION-READY MANUSCRIPT.....	19
ABSTRACT.....	21
INTRODUCTION.....	22
METHODS.....	24
RESULTS.....	28
DISCUSSION.....	36
CONCLUSION.....	41
ACKNOWLEDGMENTS.....	42
DISCLOSURES.....	43
REFERENCES.....	44
TABLES.....	47
CHAPTER 3 – OVERALL DISCUSSION.....	52
REFERENCES.....	57
APPENDIX A – Additional Tables Not Included in Manuscript.....	59
APPENDIX B – Manuscript Submission Guidelines: The International Journal of Psychiatry in Medicine.....	67



..... 67

<b>Submit Paper</b> .....	67
1. What do we publish? .....	70
2. Editorial policies .....	77
3. Publishing Policies.....	83
4. Preparing your manuscript for submission .....	85
5. Submitting your manuscript.....	86
6. On acceptance and publication .....	88
7. Further information .....	89
APPENDIX C – Approval by Human Research Ethics Committee .....	90
APPENDIX D – Approval by Groote Schuur Hospital.....	95
APPENDIX E – Data Capture Form .....	96

## ABSTRACT

**Objective:** The aim of this study was to review referrals to the consultation-liaison psychiatric service at Groote Schuur Hospital including the number of referrals, demographic details of referred patients, medical and psychiatric diagnoses, management and outcome over a five-year-period. It was anticipated that referrals had increased on an annual basis. **Method:** The study was observational and was conducted at Groote Schuur Hospital in Cape Town, South Africa. All inpatients referred to consultation-liaison psychiatry (CLP) during the study period were included. The study information was gathered via data capture sheets that are completed for patients referred to the division. **Results:** A total of 1978 patients were referred to CLP and analysed in the study. Most referrals occurred in 2018 (n=499; 25.2%). The majority of referrals came from the division of internal medicine (n=607; 30.7%), and the main reasons for referral were unspecified (n=402; 20.3%), suicide/risk assessment (n=333; 16.8%), and other symptoms of mental illness (n=264; 13.3%). The most frequent immediate management included medication initiation or adjustment (n=793; 40.1%), and supportive counselling/psychoeducation (n=511; 25.8%). **Conclusion:** Referral numbers to the division have increased during the study period as hypothesized. As expected, most referrals came from the internal medicine division. The results from this study highlight the importance of the consultation-liaison service at Groote Schuur Hospital.

## ACKNOWLEDGEMENTS

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# CHAPTER 1

## BACKGROUND AND SIGNIFICANCE

Consultation-liaison psychiatry (CLP) is a psychiatric subspecialty that addresses psychiatric symptoms in medically unwell patients who are admitted in non-psychiatric divisions in hospital<sup>1</sup>.

The role of the consultation-liaison psychiatrist is to assist in the diagnosis and management of comorbid psychiatric disorders (or the exclusion thereof) in patients who have another primary medical or surgical condition for which they are currently being treated in hospital<sup>2</sup>. Thus, CLP acts at the interface between psychiatry and other medical divisions.

The consultation-liaison (CL) psychiatrist sees patients from three broad categories: patients who have psychiatric symptoms that cause, exacerbate, or perpetuate their medical condition, those who present with symptoms of a general medical illness where no “organic” cause can be found, and those whose physical symptoms have caused psychiatric symptoms<sup>3</sup>. In practice, the CL psychiatrist at Groote Schuur Hospital (GSH) is also often asked to perform capacity assessments.

The CL psychiatrist assesses the patient from a psychiatric perspective and starts an intervention or makes suggestions to the managing team. The intervention from the CL psychiatrist is meant to be brief and directive toward further management as appropriate<sup>1</sup>.

In South Africa, CLP has recently been recognised by the College of Psychiatry under the Health Professions Council of South Africa (HPCSA) as a psychiatric subspecialty. Currently, a Masters of Philosophy in consultation-liaison psychiatry is offered through the University of Cape Town<sup>4</sup>.

The CLP division at Groote Schuur Hospital (GSH) was restructured in 2011 and currently has two consultant psychiatrists, two rotating psychiatric registrars and one psychologist. The division services the entire hospital.

The prevalence of psychiatric comorbidity among patients admitted in general hospitals in Africa has been found to be as high as 20 – 55%<sup>5</sup>. In Ethiopia, 38% of patients admitted in a general hospital were found to have depression<sup>6</sup>. In Nigeria: Mohammed, Said et al found a prevalence of 31% of psychiatric disorders in a general hospital<sup>7</sup>. Aghanwa and Morakinyo found that 55% of dialysis patients, and 20% of orthopaedic patients had mental illness<sup>5</sup>. Abiodun and Ogunremi found a 31% and 30% psychiatric comorbidity among patients in medical and surgical wards respectively<sup>8</sup>. In Uganda, two studies demonstrated a comorbid psychiatric disorder prevalence of 42%<sup>9</sup> and 48%<sup>10</sup> respectively. A Kenyan study found that 22% of a random screening sample of patients admitted in the medical ward of a general hospital had at least one psychiatric diagnosis<sup>11</sup>. Local South African literature is sparse.

In an international review article by Saravay and Levin <sup>12</sup>, a significantly increased length of hospital stay was found when psychiatric comorbidity occurred with other medical problems. For this study, 26 international articles which analysed psychiatric comorbidity and its effect on length of hospital stay were included from 1980 to 1992. Of the reviewed studies, 11 looked at geriatric patients and 15 examined adults. The studies varied in methodology and the type of psychiatric comorbidity examined. Of all the articles, when psychiatric morbidity was present, 80% showed a significant increase in hospital length of stay, one study found an increased likelihood of readmission within one year, and another study found an increase in six-month mortality.

Wood and Wand conducted a systematic review of 40 global studies to look at, among other things, the effectiveness of CLP<sup>13</sup>. They found that there is evidence that CLP services can be cost-effective and can decrease the length of hospital stay.

The effect of psychiatric comorbidity cannot be overstated: patients tend to be less adherent to medical treatments, have more frequent and longer hospital stays, have a poorer medical and psychiatric prognosis, and have a poorer quality of life<sup>14</sup>. It follows then, that psychiatric comorbidity leads to negative consequences not only for patients, but also for the economy at large.

To date there has only been one retrospective analysis of the CLP division at GSH, as part of a Master of Medicine, completed in 2016 by Dr John Torline<sup>15</sup>. In this study, inpatient referrals to the division of CLP were analysed over a 13-month period from 2011 - 2012. A referral rate of 0.95% of all admissions to the hospital was found for the period in question, with a total of 452 total referrals to CLP. The majority of referred patients were females (61.5%) and were aged between 18 and 59 years (82%). The division that referred most frequently was internal medicine (60%) with the medical subspecialty division of neurology contributing the biggest portion (6.4%). The most common psychiatric symptoms on referral were mood symptoms (35.5%), suicidal behaviour (23%), and behavioural disturbance (21%). Ultimately, 78% of all referred patients were found to have at least one psychiatric diagnosis.

Alcohol-use disorder was diagnosed in 9.5% of referrals, methamphetamine-use disorder in 4.2% and "other" substance-use disorders in 8.8%. The commonest medical diagnoses included "other" (21%), and infectious disease (18.6%). Human Immunodeficiency Virus was present in 15.5% of the cohort. Just over half of all participants (55%) had significant psychosocial or environmental stressors contributing to diagnosis, management, and prognosis of their illness.

Medication was initiated in 31% of participants. A significant proportion of the patients were discharged from psychiatric care following consult (65%). Just under 14% of referred patients were admitted to inpatient psychiatric services.

## REVIEW OF EXISTING LITERATURE

### **Search Strategy**

The target population for this study was any inpatients from non-psychiatric wards referred to the division of CLP during the period 2014 to 2018. All published studies from within Africa that analysed referrals to CLP were assessed. Within these studies, number and rates of referral to CLP, referral sources, psychiatric diagnoses, medical diagnoses, psychiatric management, and disposal were assessed.

The databases PubMed, Scopus, and PsychINFO were searched for any articles that considered consultation-liaison psychiatry in African hospitals. The search terms used were: (liaison OR consultation liaison OR consultation liaison psychiatry OR consultation-liaison psychiatry OR CLP OR hospital psychiatry OR psychosomatic medicine OR psychosomatic OR liaison psychiatry OR consultation psychiatry OR C-L psychiatry) AND (referral OR referrals OR refer OR psychiatric referral) AND (inpatient OR in-patient OR admitted OR consultation OR hospitalized OR hospitalised) AND (Africa).

Inclusion criteria were: articles in English, articles considering CLP in a general hospital, and articles from within the African continent. There were no specific exclusion criteria. The PubMed search yielded 644 results, of which seven were selected for review. After review of abstracts for relevance, five articles were included in the literature review. The Scopus search yielded nine results, of which two were relevant. The PsychINFO search yielded 15 results of which none were relevant. After removal of duplicates of the seven articles, five were remaining for the literature review. One additional article was sourced by a protocol reviewer. This article was not available on PubMed, Scopus, nor PsychINFO and was thus not located during the search process. Therefore, there were a total of six articles included in the literature review.

## **Summary of findings:**

Few studies have been performed in Africa with regards to consultation-liaison psychiatry. The studies that have been conducted vary somewhat in methodology but the main focus has been on an analysis of referrals to CLP, as well as the assessment of control groups of unreferral patients for unrecognized mental illness within a general hospital setting.

**Study 1: Addington Hospital, Durban, South Africa.** In one of the two published South African studies on CLP, Gangat et al reviewed the referral patterns to psychiatry in a hospital in Addington, Durban, in 1985<sup>3</sup>. The authors analysed 597 outpatient referrals and 259 inpatient referrals from other divisions in the large general hospital. The rate of referral to psychiatry was found to be 0.78% of all outpatient consults, and 1.8% of all admissions to the hospital. Of the inpatient referrals, 70% came from the medical and allied divisions, 18% from surgical and allied, and 4% from the obstetrics and gynaecology divisions. The most frequent diagnosis made was depression (33%). "Neuroses", including adjustment disorders, accounted for 15% of diagnoses, and substance-use was diagnosed in 12%. The fifth largest category of diagnosis was found to be no mental disorder, accounting for 6.5% of all diagnoses\*. The psychiatric interventions included initiation of psychotropic medication in 38% of patients, psychotherapy in 18%, and no psychiatric intervention in 6%. Outcomes and referrals included referral to the psychiatric outpatient division (OPD) (59%), advice given to the treating team with the patient remaining in the medical ward (21%), admission to a psychiatric ward (7.5%), referral to a social worker (6%), and referral to a psychiatric hospital (5%).

\*No mental disorder means that any possible psychiatric symptoms were subthreshold for a psychiatric disorder. This could be accounted for by capacity assessments where there is no mental disorder, for example when a patient refuses hospital treatment but is found to have capacity, or by interpersonal difficulties between the patient and the hospital staff.

**Study 2: Helen Joseph Hospital, Johannesburg, South Africa.** In the second published South African study, the authors examined the profile of referrals to the CLP service at Helen Joseph Hospital in

Johannesburg, and then described the clinical management of those patients who were diagnosed and admitted with a mental disorder associated with a medical condition<sup>16</sup>. This study took place over a six-month period in 2009 and was a retrospective record review. The hospital serves mainly an adult population with the youngest age of admission being 13 years old. Patients that were referred for psychiatric assessment, and then admitted in the medical or psychiatric ward for either: (i) delirium, (ii) dementia, (iii) mood disorder due to another medical condition, or (iv) psychosis due to another medical condition, were included in the study. For the study period in question, a total of 884 routine and emergency consults were conducted for a total of 662 patients. Non-fatal suicidal behaviour was not included in the study as the psychology division routinely handled these cases. The number of consultations per division were as follows: accident and emergency (535), medicine (294), surgery (43), and allied (12). The male to female consultation ratio was 1:1.2. Most referred patients were between 16 and 45 years old (73.1%). The reasons for referral were: assessment (mental state assessment, re-consultation, assessment of capacity) (28%), mood symptoms (20%), suicidal attempt or thoughts (16%), psychosocial stressor (14%), behavioural disturbance (9%), confusion (8%), and psychosis (7%). The five commonest provisional diagnoses were: unspecified or no axis one diagnosis\* (including axis two diagnoses of personality disorder and intellectual disability) (17%), delirium (12%), depressive disorders (12%), schizophrenia (10%), and bipolar disorders (9%). Only 10% of patients were subsequently admitted to a medical or psychiatric ward with one of the four diagnoses included in the study (67% and 33% respectively).

\*Axis one diagnoses include any mental disorder other than personality disorder and intellectual disability (these are axis two diagnoses) according to the Diagnostic and Statistical Manual IV-TR<sup>17</sup>.

The underlying medical conditions in these 63 patients were divided into systemic (extracranial) conditions (54%) and neurological (intracranial) conditions (51%). HIV/AIDS was considered as an overlapping cause. The remaining 5% did not have the underlying medical condition documented. With respect to the treatment outcomes, the average length of stay for patients in the medical wards was 13 days, and for those in the psychiatric wards it was 11 days. Outcomes included referrals to outpatient psychiatry (51%), referrals to medical specialist clinics (26%), and referrals to other psychiatric hospitals (9%).

The literature in the rest of Africa is explored:

**Study 3: University College Hospital, Ibadan, Nigeria.** Joseph Adeyemi followed a group of inpatient referrals to psychiatry over a one-year period and compared this to a control group of unreferred patients in a Nigerian teaching hospital in 1986<sup>18</sup>. The referral rate to psychiatry was 0.9%. Of the referred group, 67.5% was found to have mental illness. The high rate of referrals with no mental disorder was due to history of psychiatric interaction, problems of diagnosis of difficult physical illness, and interpersonal difficulty. Of the control group, 41.3% was found to have an unrecognized mental illness. The main disorders in the unreferred population were relatively minor disorders including anxiety and mild depression. In this study, neither the rates of discharge nor the reasons for discharge were examined.

**Study 4: Ife State Hospital, Ile-Ife, Nigeria.** In 1996, an article by Aghanwa et al was published which examined the patterns of the CLP service in a general hospital in Nigeria over five years<sup>19</sup>. This tertiary governmental hospital is also a teaching hospital and has 321 beds across all clinical divisions. Being a tertiary hospital, most patients are referred from other facilities, but the hospital also has a general outpatient clinic which accepts self-referrals who can then be referred

appropriately if necessary. For this study, cases of suspected mental disorders complicating physical illnesses were referred to psychiatry by the treating physician or surgeon. On the same day of referral, a psychiatry registrar would see the patient first and then the consultant would review the case. The consult consisted of a read-through of the notes, an interview of the patient, collateral when available, a report by nursing staff as to the patient's behaviour in the ward, a mental state examination of the patient, formulation of a diagnosis and management plan, communication of this with the treating team, and patient follow-up. The Mental Health Division kept a consultation-liaison psychiatry register onto which all the details of referrals were recorded from 1987 till 1992 which comprised the study period. The referral rate to psychiatry was 0.48% of which 54% were females and 46% were males. More than half of all patients were between 16 and 45 years old. Most referrals (53%) came from the internal medicine division, 22% each came from obstetrics & gynaecology and surgery, and 3% from paediatrics. The illnesses that the referred patients were admitted for included infective disorders (23%), cardiovascular disorders (16%), neurological disorders (15%), obstetric conditions (13%), trauma (8%), neoplasms (6%), surgical conditions (6%), self-poisoning or self-mutilation (5%), renal failure (5%), haematological disorder (2%), and metabolic disorder and "other" (1% each). Cases were referred on average a week after mental symptoms emerged. The attitude by the health professionals toward the patient with psychiatric comorbidity was assessed by the authors as discriminatory. The request was always for the immediate transfer of the patient to the psychiatric ward even when no high-risk behaviours were present. Psychiatric diagnoses included acute brain syndrome (25%), brief reactive psychosis (22%), depressive disorder (12%), dementia (9%), anxiety disorder (2%), and no mental disorder (4%). The study did not examine the rates of discharge and the reasons for discharge.

**Study 5: University of Ilorin Teaching Hospital, Ilorin, Nigeria.** Another study conducted in a Nigerian teaching hospital in 2001, examined referrals to the psychiatric division from other

specialist divisions over a six-month period<sup>20</sup>. The number of referred patients was 47. Again, the highest volume of referrals came from the division of internal medicine, accounting for two thirds of referrals. Other referrals were from surgery (15%), paediatrics (11%), and obstetrics and gynaecology (9%). Reasons for referral included the presence of psychiatric symptoms (57%), previous contact with psychiatry (15%), deliberate self-harm (6.4%), and assistance with diagnosis (4.3%). In this study, the primary diagnosis made was acute organic brain syndrome (32%). Other diagnoses included no mental disorder (17%), schizophrenia (11%), deliberate self-harm and adjustment disorders (9% each). With respect to psychiatric intervention, psychotropic medication was initiated in 62% of cases and counselling was given to 25% of participants. Patient disposal included stabilization and referral for follow up at the psychiatric outpatient division (25%), deceased due to complications of the medical illness (19%), discharge by relatives against medical advice (17%), discharge by the treating team without informing the CLP team (17%), transfer to the psychiatric inpatient unit (11%), transfer to another hospital for the medical illness (6%), and no psychiatric intervention required (4%).

**Study 6: Mbarara Regional Referral Hospital, Mbarara, Uganda.** In 2013, Rukundu et al conducted a descriptive cross-sectional study to determine the prevalence of psychiatric comorbidity among physically ill patients admitted in a hospital in Uganda<sup>9</sup>. Of a sample size of 258 participants, they found a 42% rate of comorbidity of at least one psychiatric disorder. The most common psychiatric disorders diagnosed were depression (34%), and anxiety disorders (11%). Of all the participants found to have psychiatric illness, 59% were located in the medical wards and 41% in the surgical wards. In this study, Rukundu et al also found that participants with psychiatric comorbidity were more likely to have had more admissions to the hospital overall. The study did not examine referrals to CLP, or reasons and rates of discharge.

## Conclusion:

The literature demonstrates a paucity of studies relating to CLP in Africa, especially of recent and South African studies. The six articles above were conducted from 1985 to 2013 which is a range of nine to thirty-six years ago. An update in this literature is needed. Furthermore, the two South African studies had study periods of six- and thirteen-months respectively. The other African studies, excluding one, have similarly short study periods of six months to a year. The sample sizes are generally small. For more robust data on CLP in South Africa, a longer study period is required with a larger sample size.

## HYPOTHESIS

Mental health professionals working in the department of consultation-liaison psychiatry (CLP) at Groote Schuur Hospital (GSH) are experiencing that the volume of referrals to the department is increasing. This specialized CLP service is essential to meet the diverse psychiatric needs of patients admitted in hospital with other medical or surgical diagnoses. We hypothesize that utilisation of the service is increasing on an annual basis.

## AIM

The aim of this study is to outline the characteristics of inpatient referrals to the division of CLP at Groote Schuur Hospital and to describe the outcomes of the referrals over a five-year period from 2014 to 2018. We aim to determine if the number of referrals is increasing, if there has been a change in the pattern of referrals, and what may account for this. This is to facilitate better understanding of the current status of the service and to find areas in which to improve it.

## OBJECTIVES

1. To determine the number of referrals to the department of CLP at GSH.
2. To establish the characteristics of referred patients including demographics, which departments refer to CLP, and reasons for referrals.
3. To determine if there is an association between the referring department and the reason for referral.
4. To identify the psychiatric diagnoses and the management of referred patients.
5. To determine the disposal of referred patients.
6. To establish if there is an association between the psychiatric diagnoses and the immediate management.
7. To examine the concordance between the reason for referral by the referring department and the final psychiatric diagnosis by CLP.
8. To determine the referrals from CLP to other divisions.
9. To determine risk to self and others in the referred population.
10. To establish the length of time from hospital admission until CLP referral, and from CLP referral until CLP assessment.
11. To determine the number of patients who absconded or died after referral.
12. To determine the number of patients using substances and which substances they used.
13. To analyse social problems in the referred population.
14. To determine the changes in the above parameters for each year included in the study.
15. To add to and update the body of knowledge concerning CLP at GSH including how the service has changed over time.

Table 1.1 Summary of Articles Included in Literature Review										
STUDY	YEAR	DURATION	COUNTRY	PARTICIPANTS	REFERRAL SOURCE (%)	COMMONEST REASON FOR ADMISSION / PHYSICAL DXs (%)	REFERRAL RATE TO PSYCH	COMMONEST REASON FOR REFERRAL (%)	COMMONEST PSYCHIATRIC DIAGNOSES (%)	MANAGEMENT / OUTCOME (%)
1) REFERRAL PATTERNS FOR PSYCHIATRIC CONSULTATION IN A LARGE GENERAL HOSPITAL (GANGAT ET AL) <sup>3</sup>	1985	6 MONTHS	DURBAN, SOUTH AFRICA	597 IN AND OUTPATIENTS	OUTPATIENT: 57 INPATIENT: 43  OF INPATIENT: MEDICINE: 70 SURGERY: 18 OBS&GYN: 4	-	1.8% INPATIENT 0.78% COMBINED	PARASUICIDE: 24 MDD: 13 STRANGE BEHAVIOUR: 11 ALCOHOL ABUSE: 7	MDD: 33 NEUROSES: 15 SUBSTANCE: 12	MEDICATION PRESCRIBED: 38 THERAPY: 18 ASSESSMENT ALONE: 12 NO INTERVENTION WARRANTED: 6
2) PSYCHIATRIC CONSULTATIONS AND THE MANAGEMENT OF ASSOCIATED COMORBID MEDICAL CONDITIONS IN A REGIONAL REFERRAL HOSPITAL (TEMA AND RENSBURG) <sup>16</sup>	2009	6 MONTHS	JOHANNESBURG, SOUTH AFRICA	662 INPATIENTS	A&E: 61 MEDICINE: 33 SURGERY: 5 ALLIED: 1	SYSTEMIC (INFECTIVE/HIV; TOXIC, METABOLIC; NUTRITIONAL):54 INTRACRANIAL (VASCULAR; MENINGITIS;	-	REQUEST FOR ASSESSMENT: 28 MOOD SYMPTOMS: 20 SUICIDALITY: 16	NO AXIS 1 DIAGNOSIS: 17 DELIRIUM: 12 MDD: 12 SCHIZOPHREN: 10 BIPOLAR D/O's: 9 SIPD: 9	ADMITTED TO MEDICAL OR PSYCHIATRIC WARD: 10  OF THESE: ADMITTED TO MEDICAL WARD: 67 ADMITTED TO PSYCH WARD: 33

						HEAD TRAUMA): 51		PSYCHOSOCIAL STRESSOR: 14 BEHAVIOUR DISTURBANCE : 9		
3) IN-PATIENT PSYCHIATRIC REFERRALS IN A TEACHING HOSPITAL: A CASE CONTROLLED REPORT (ADEYEMI) <sup>18</sup>	1986	1 YEAR	NIGERIA	77 REFERRED 75 CONTROL INPATIENTS	-	INFECTIOUS: 27 GIT:22 OBSTETRIC: 14 INJURY/POISON: 14 CVS: 12	0.9% (DELIBERATE SELF-HARM EXCL)	-	DELIRIUM: 30 NO DIAGNOSIS: 26 MDD: 8 SCHIZOPHREN: 6	REFERRED POPULATION WITH MENTAL DISORDER: 68 UNREFERRED POPULATION WITH MENTAL DISORDER: 41
4) CONSULTATION LIAISON-PSYCHIATRY IN A GENERAL HOSPITAL SETTING IN WEST AFRICA (AGHANWA ET AL) <sup>19</sup>	1987 - 1992	5 YEARS	NIGERIA	87 INPATIENTS	MEDICINE: 53 OBS&GYN: 22 SURGERY: 22 PAEDIATRICS: 3	INFECTIOUS: 23 CVS: 16 NEUROLOG: 15 OBSTETRIC: 15 TRAUMA: 8	0.48%	-	ACUTE BRAIN SYNDROME: 25 BRIEF REACTIVE PSYCHOSIS: 22 MDD: 12 DEMENTIA: 9	-
5) A PROSPECTIVE ANALYSIS OF IN-PATIENT CONSULTATION-LIAISON	2001	6 MONTHS	NIGERIA	47 INPATIENTS	MEDICINE: 60 SURGERY: 15 PAEDS: 11	INFECTIOUS: 32 NEUROLOG: 15 CVS: 9	-	PSYCH SYMPTOMS: 57	DELIRIUM: 32 NO DIAGNOSIS: 17 SCHIZOPHREN: 11	MEDICATION PRESCRIBED: 62 COUNSELLING: 25

PSYCHIATRY IN A NIGERIAN TEACHING HOSPITAL (AJIBOYE AND ADELEKAN) <sup>20</sup>					OBS&GYN: 9	SURGICAL: 6 OTHER: 28		PREV PSYCH CONTACT: 17 TRANSFER TO PSYCH WARD: 6 DELIBERATE SELF-HARM: 6 DIAGNOSTIC ASSISTANCE: 4	DELIBERATE SELF- HARM: 9 ADJUSTMENT D/O: 9 PSYCHOSIS: 4	D/CH TO PSYCH OPD: 26 DIED: 19 D/CH BY REFERRING TEAM: 17 D/CH AGAINST MED ADVICE: 17 TRANSFER TO PSYCH WARD: 11 TRANSFER TO ANOTHER HOSP: 6 NO PSYCH INTERVENTION REQUIRED: 4
6) PSYCHIATRIC MORBIDITY AMONG PHYSICALLY ILL PATIENTS IN A UGANDAN REGIONAL REFERRAL HOSPITAL (RUKUNDO ET AL) <sup>9</sup>	2013	-	UGANDA	258 TOTAL INPATIENTS  109 FOUND TO HAVE PSYCHIATRIC CO-MORBIDITY	-	HIV/AIDS: 22 LRTI: 18 MALARIA: 13 TB: 10 FRACTURES: 10	-	-	MDD: 34 ANXIETY D/O: 11 ETOH: 5 PSYCHOSIS GMC:2	PSYCHIATRIC COMORBIDITY IDENTIFIED BY ATTENDING DRS: 6 NOT IDENTIFIED: 94

## REFERENCES

1. Vythilingum B and Chiliza B. Consultation liaison psychiatry in Africa -- essential service or unaffordable luxury? *Afr J Psychiatry (Johannesbg)* 2011; 14: 257. DOI: 10.4314/ajpsy.v14i4.1.
2. Chen KY, Evans R and Larkins S. Why are hospital doctors not referring to Consultation-Liaison Psychiatry? - a systemic review. *BMC Psychiatry* 2016; 16: 390. 20161109. DOI: 10.1186/s12888-016-1100-6.
3. Gangat AE, Naidoo LR and Simpson MA. Referral patterns for psychiatric consultation in a large general hospital. *S Afr Med J* 1987; 72: 853-855.
4. The Colleges of Medicine of South Africa [homepage on the Internet]. No date [cited 30 April 2022]. Available from: [http://www.cmsa.co.za/view\\_exam.aspx?QualificationID=113](http://www.cmsa.co.za/view_exam.aspx?QualificationID=113).
5. Aghanwa H and Morakinyo O. Psychiatric complications of hemodialysis at a kidney center in Nigeria. *Journal of psychosomatic research* 1997; 42: 445-451.
6. Duko B, Erdado M and Ebrahim J. Prevalence and factors associated with depression among hospital admitted patients in South Ethiopia: cross sectional study. *BMC Res Notes* 2019; 12: 73. 20190204. DOI: 10.1186/s13104-019-4109-3.
7. Mohammed A, Said JM, Wakil MA, et al. Unrecognized psychiatric disorders among adult patients admitted into a general hospital in Maiduguri, Northeastern Nigeria. *Pan Afr Med J* 2014; 19: 197. 20141024. DOI: 10.11604/pamj.2014.19.197.4531.
8. Abiodun OA and Ogunremi OO. Psychiatric morbidity in medical and surgical wards of a Nigerian general hospital. *J Psychosom Res* 1990; 34: 409-414. DOI: 10.1016/0022-3999(90)90064-b.
9. Rukundo ZG, Musisi S and Nakasujja N. Psychiatric morbidity among physically ill patients in a Ugandan Regional Referral Hospital. *Afr Health Sci* 2013; 13: 87-93. DOI: 10.4314/ahs.v13i1.13.
10. Nakasujja N, Musisi S, Walugembe J, et al. Psychiatric disorders among the elderly on non-psychiatric wards in an African setting. *Int Psychogeriatr* 2007; 19: 691-704. 20070430. DOI: 10.1017/s1041610207005418.

11. Kigamwa A. Psychiatric morbidity and referral rate among medical in-patients at Kenyatta National Hospital. *East Afr Med J* 1991; 68: 383-388.
12. Saravay SM and Lavin M. Psychiatric comorbidity and length of stay in the general hospital. A critical review of outcome studies. *Psychosomatics* 1994; 35: 233-252. DOI: 10.1016/s0033-3182(94)71772-2.
13. Wood R and Wand AP. The effectiveness of consultation-liaison psychiatry in the general hospital setting: a systematic review. *J Psychosom Res* 2014; 76: 175-192. 20140113. DOI: 10.1016/j.jpsychores.2014.01.002.
14. Gitlin DF, Levenson JL and Lyketsos CG. Psychosomatic medicine: a new psychiatric subspecialty. *Acad Psychiatry* 2004; 28: 4-11. DOI: 10.1176/appi.ap.28.1.4.
15. Torline J. In-patient Referrals to Consultation-Liaison Psychiatry at a Tertiary Hospital in South Africa. University of Cape Town, 2016.
16. Tema NS and van Rensburg AJ. Psychiatric consultations and the management of associated comorbid medical conditions in a regional referral hospital. *South African Journal of Psychiatry* 2015; 21: 67-72.
17. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition. Washington, DC: American Psychiatric Association; 1994.
18. Adeyemi JD. In-patient psychiatric referrals in a teaching hospital: a case controlled report. *J Psychosom Res* 1996; 41: 427-433. DOI: 10.1016/s0022-3999(96)00194-8.
19. Aghanwa HS, Morakinyo O and Aina OF. Consultation-liaison psychiatry in a general hospital setting in west Africa. *East Afr Med J* 1996; 73: 133-136.
20. Ajiboye PO and Adelekan ML. A prospective analysis of in-patient consultation-liaison psychiatry in a Nigerian teaching hospital. *East Afr Med J* 2004; 81: 620-625. DOI: 10.4314/eamj.v81i12.9246.

## CHAPTER 2 – PUBLICATION-READY MANUSCRIPT

A RETROSPECTIVE ANALYSIS OF REFERRALS TO CONSULTATION-LIAISON  
PSYCHIATRY OVER A FIVE-YEAR PERIOD IN A TERTIARY HOSPITAL IN SOUTH  
AFRICA

**BAILEE J ROMBURGH (MBChB, DMH)**

**JACQUELINE HOARE (PhD, MPhil, FRCPsych UK, FCPsych, DMH, MBChB)**

*University of Cape Town, South Africa*

**CORRESPONDING AUTHOR:**

*Bailee J Romburgh*

*12 Oranje Road, Kirstenhof, Cape Town, South Africa*

*baileejean@gmail.com*

## ABSTRACT

*Objective:* This study sought to review the characteristics and patterns of referral to a consultation-liaison psychiatric service in a general hospital setting over a five-year-period in South Africa.

*Methods:* This was a retrospective study of a consecutive sample of all inpatient referrals to the division of consultation-liaison psychiatry (CLP) over a five-year period from 2014 to 2018. For each psychiatric assessment conducted in the division, key referral information was captured on a data sheet and the information on the data sheets was analysed. The study was conducted at Grootte Schuur Hospital in Cape Town, South Africa. *Results:* A total of 1978 patients were referred to CLP during the study period. The highest number of referrals per annum was in 2018 (n=499; 25.2%). The divisions that referred most frequently were internal medicine (n=607; 30.7%), obstetrics and gynaecology (n=282; 14.3%), surgery (n=204; 10.3%), and neurology (n=182; 9.2%). The commonest reasons for referral were unspecified (n=402; 20.3%), suicide/risk assessment (n=333; 16.8%), symptoms of mental illness: other (n=264; 13.3%), and depression (n=236; 11.9%). The main psychiatric diagnoses made by the CLP team after assessment were depression (n=367; 18.6%), substance-use disorder (n=202; 10.2%), adjustment disorder (n=200; 10.1%), and psychotic disorder (n=189; 9.6%). There was no mental illness in 17% of referrals (n=343). Immediate management included mainly medication initiation or adjustment (n=793; 40.1%), and supportive counselling/psychoeducation (n=511; 25.8%). *Conclusion:* During the study period, the service has grown. The characteristics of referrals remained relatively unchanged throughout the study period. The results presented assist in highlighting the need for a consultation-liaison service in a general hospital context in South Africa.

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**Key words:** consultation, liaison, psychiatry, referrals, inpatients

## INTRODUCTION

Consultation-liaison psychiatry (CLP) is a psychiatric subspecialty that addresses psychiatric symptoms in medically unwell patients who are admitted in non-psychiatric divisions in hospital<sup>1</sup>. The role of the consultation-liaison psychiatrist is to assist in the diagnosis and management of comorbid psychiatric disorders (or the exclusion thereof) in patients who have other primary medical or surgical conditions for which they are currently being treated in hospital<sup>2</sup>. Thus, CLP acts at the interface between psychiatry and other medical divisions.

The consultation-liaison (CL) psychiatrist assesses the patient from a psychiatric perspective and starts an intervention or makes suggestions to the managing team. The intervention from the CL psychiatrist is meant to be brief and directive towards further management as appropriate<sup>1</sup>.

The prevalence of psychiatric comorbidity among patients admitted to general hospitals in Africa has been found to be as high as 20 – 55%<sup>3</sup>. In a review article by Saravay and Lavin<sup>4</sup>, a significantly increased length of hospital stay was found when psychiatric comorbidity occurred with other medical problems. Wood and Wand conducted a systematic review of 40 global studies to examine the effectiveness of CLP<sup>5</sup>. They found evidence that CLP services can be cost-effective and can decrease the length of hospital stay. Furthermore, patients with psychiatric comorbidity tend to be less adherent to medical treatments, have more frequent hospital admissions, have a poorer medical and psychiatric prognosis, and have poorer quality of life<sup>6</sup>. It follows then, that psychiatric comorbidity leads to negative consequences not only for patients, but also for the health system at large.

This study was conducted at Groote Schuur Hospital (GSH) in Cape Town, South Africa. GSH is a government-funded, tertiary, teaching hospital that has 970 beds throughout all major medical, surgical, and many specialized divisions<sup>7</sup>. To date there has been one retrospective analysis of the CLP division at GSH in the form of a Master of Medicine, completed in 2016 by Dr John Torline<sup>8</sup>. In this study, inpatient referrals to the division of CLP were analysed over a 13-month period from 2011

- 2012. A referral rate of 0.95% of all admissions to the hospital was found for the period in question, with a total of 452 total referrals to CLP. The majority of referred patients were females (61.5%) and were aged between 18 and 59 years (82%). The division that referred most frequently was medicine (60%) with the medical subspecialty division of neurology contributing the biggest portion (6.4%). The most common psychiatric symptoms on referral were mood symptoms (35.5%), suicidal behaviour (23%) and behavioural disturbance (21%). Alcohol-use disorder was diagnosed in 9.5% of referrals. Patient disposal included discharge from psychiatric care following consult (65%) and admission to inpatient psychiatric services (14%).

Only two studies of consultation-liaison psychiatry services in South Africa have been published. Gangat et al reviewed inpatient and outpatient referral patterns to psychiatry in a hospital in Durban from January to June 1985<sup>9</sup>. Of the 14448 inpatients during this period, 259 (1.8%) were referred to the division of psychiatry. They found that, of the 259 inpatient referrals, 70% came from internal medicine and allied divisions. The most frequent diagnosis made was depression (33%). Psychotropic medication was initiated in 38% of patients, and 59% of patients were discharged to follow up at the psychiatric outpatient division.

In a 2009 study, the profile of referrals to the CLP service at a hospital in Johannesburg was assessed and 664 patients were reviewed<sup>10</sup>. Most referrals came from the emergency division (81%), and were between 16 and 45 years old (73.1%). The commonest diagnosis was no axis 1 diagnosis (any mental disorder other than a personality disorder or intellectual disability according to The Diagnostic and Statistical Manual IV – TR<sup>11</sup>) (17%), and depressive disorder (12%). Just over half of cases were referred to outpatient psychiatry (51%).

To our knowledge, no published study on consultation-liaison psychiatry in Cape Town exists. The goal of this study was to determine the characteristics of referrals to the division and to determine how these have changed over a five-year period.

## METHODS

### **Study Setting**

This study was conducted at Groote Schuur Hospital in Cape Town, South Africa. Groote Schuur Hospital (GSH) is a government-funded, tertiary, teaching hospital, in an urban setting. The hospital has 970 beds throughout all major medical, surgical, and some super-specialized divisions<sup>13</sup>. The CLP division at GSH was restructured in 2011 and currently has two consultant psychiatrists, two rotating psychiatric registrars and one psychologist. The division services the entire hospital.

### **Participants**

The sample included all inpatient referrals to the division of consultation-liaison psychiatry from non-psychiatric wards within GSH from January 2014 until December 2018. This includes all patients admitted at GSH to non-psychiatric wards who were referred to CLP regardless of age, gender, race, reason for referral or psychiatric diagnosis. Urgent outpatient referrals were covered by the emergency psychiatry division and were thus excluded from the study. The CLP division is a 24-hour service and all referrals including adults, adolescents, and paediatrics were included in the study. Groote Schuur Hospital generally admits adolescents aged 13 and above but there is one paediatric ward and these referrals, although few, were included in the study. Referrals from the medical emergency and trauma emergency divisions were largely not included in the study as they are mostly assessed and managed by the emergency psychiatry division. The few referrals from the emergency medical and emergency trauma units that were reviewed by CLP were for non-psychiatric admissions where there were mild psychiatric symptoms or the patient was known with a psychiatric history. Referrals of HIV positive patients were not included in the study because they were managed by the neuropsychiatry division. Patients who were referred to CLP and thereafter tested positive for HIV were taken over by the neuropsychiatry division and thus excluded from the study. Referrals from non-psychiatric wards after hours were assessed by the on-call doctor and handed over to the CLP division the following day and were thus included in the study. If the same

patient was admitted to the hospital and referred more than once to the division of CLP during the study period, then this was counted as a separate referral in the study. There were very few high service users. All referrals were initially seen by psychiatry, and none were only seen by an allied profession such as psychology only. Apart from HIV positive patients, and most referrals from the emergency centre, there were no other specific exclusion criteria.

### **Informed Consent and Ethics approval**

The research protocol was reviewed and ethics approval granted by the University of Cape Town Human Research Ethics Committee (433 / 2020). Approval was granted by Groote Schuur Hospital to conduct the study. In this study, no direct patient interaction took place and folders were not reviewed. Only the data capture sheet from hospital records was used. As the study collected data retrospectively from this data capture sheet and was anonymised, no direct patient interaction was required for data collection and thus informed consent was not required. To avoid duplicates, patient folder numbers were used. In order to protect patient confidentiality, the folder numbers were stored on the data sheets in a locked office, and data capturing only took place on the GSH premises.

### **Measurements**

For every patient referred to and seen by the CLP team, there was a corresponding data sheet which was completed by the consultant who managed the patient. The data capture sheets were in English. The completed forms were kept in a confidential file behind a locked office door within the GSH premises. These data sheets formed part of the routine documentation process of the CLP service at GSH and were not specifically designed for the study. The data as per the form included:

- patient demographics
- referring division and patient location
- medical diagnosis or reason for admission

- substance use and if so which
- reason for and date of referral (patients were referred for only one, primary reason, and this is how the data were analysed)
- final diagnosis made by attending psychiatric team (Psychiatric and substance-use disorder diagnoses were made based on the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition criteria.<sup>12</sup>)
- entries for each date the patient was reviewed by the team or members thereof including initial assessment, multi-disciplinary team (MDT) ward round, review by consultant psychiatrist, review by psychologist or any other member of the MDT
- psychiatric intervention including no intervention, commencement or adjustment of medication, referral to psychology or social worker or other member of the MDT, other intervention
- the outcome including discharge from psychiatry, transfer to psychiatric ward, follow up as outpatient, death, other
- the follow up plan details for the patient

The total number of patient referrals per year was also analysed and this was counted as the total number of patients seen and not the number of times each patient was seen.

### **Missing Data**

Data were cleaned and coded according to the code book. Missing data were noted and excluded listwise. Data from the code book were cleaned.

## **Analysis**

Data were captured onto an electronic database by a third-party data-capturer. The data were analysed using the statistical package SPSS version 22. Descriptive statistics (frequency tables) were used to analyse the number of referrals to CLP per year, the age and gender of patients referred per year, the referring department and reasons for referral per year, the psychiatric diagnoses, immediate management, and patient referrals by psychiatry per year, the risk to self and others per year, the period from time of admission to CLP referral and from CLP referral to CLP assessment per year, the presence or absence of substance use (and if present, what substance is used), social problems per year, and medical diagnoses per year.

Inferential statistics (chi-square analysis) was used to determine if there was an association between the referring department and the reasons for referral, and if there was an association between the psychiatric diagnosis and the immediate management of patients.

## RESULTS

A total of 1978 patients were referred to and assessed by psychiatry during the study period. The increase in the number of referrals from 2014 to 2018 was 7%. Most referrals were in 2018 (n=499; 25.2%), while 2015 saw the least referrals (n=347; 17.5%). There was a small decrease in the number of referrals from 2014 to 2015 (n=357; 18.0% to n=347; 17.5%) and a larger decrease in the number of referrals from 2016 to 2017 (n=412; 20.8% to n=350; 17.7%).

- Insert Table 1 here -

### **1. Time Period from Admission to Referral**

The mean time from admission to GSH and referral to CLP was 7.48 (SD, 12.09) days, with a minimum of 0 days and a maximum of 116 days. In 2014, the mean time from admission to referral was 7.17 (SD, 10.45) days with a minimum of 0 and a maximum of 106 days. In 2015 this was 7.47 (SD, 12.79) days with a minimum of 0 and a maximum of 101 days. In 2016 this was 6.82 (SD, 11.75) days with a minimum of 0 and a maximum of 98 days. In 2017 this was 8.96 (SD, 16.03) days with a minimum of 0 and a maximum of 116 days. In 2018 this was 7.06 (SD, 12.46) days with a minimum of 0 and a maximum of 114 days.

### **2. Time Period from Referral to CLP Assessment**

The mean time from CLP referral to CLP assessment was 0.48 (SD, 0.91) days with a minimum of 0 days and a maximum of 8 days. In 2014 the mean time from referral to CLP and assessment by CLP was 0.65 (SD, 1.04) days, with a minimum of 0 and a maximum of 8 days. In 2015 the mean time from referral to assessment was 0.62 (SD, 1.01) days with a minimum of 0 and a maximum of 6 days. In 2016 the time from referral to CLP assessment was 0.41 (SD, 0.78) days with a minimum of 0 and a maximum of 5 days. For 2017 the time from referral to CLP assessment was 0.28 (SD, 0.67) days with a minimum of 0 and a maximum of 6 days. In 2018 the time from referral to CLP assessment was 0.35 (SD, 0.63) days with a minimum of 0 days and a maximum of 3 days.

### **3. Number of Referrals per Department Compared to Time Period from Admission to CLP Referral**

There was no direct relationship between the number of referrals to CLP and the time delay from admission to referral. Neurosurgery had 10 referrals and internal medicine had 607 referrals and the time-period from admission to CLP referral was 6.2 and 6.1 days respectively. The shortest referral time was from the casualty department (1.9 days with 81 referrals) and the longest referral time was from the orthopaedics division (14.7 days with 95 referrals).

### **4. Number of Referrals per Department Compared to Time Period from CLP Referral to CLP**

#### **Assessment**

There did not appear to be any direct relationship between the number of referrals per department and the time-delay between CLP referral and CLP assessment.

### **5. Demographic Details**

The mean age of referred patients was 36.68 years (SD, 16.97) with a minimum age of five years and a maximum age of 95 years. Of the total number of referrals, 1182 were female (59.8%), 767 were male (38.8%), and there were data missing for 29 patients.

### **6. Sources of Referral**

The division that referred most frequently was internal medicine (n=607; 30.7%), followed by obstetrics and gynaecology, "other"\* (n=282 each; 14.3% each), surgery (n=204; 10.3%), neurology (n=182; 9.2%), paediatrics (n=103; 5.2%), orthopaedics (n=95; 4.8%), the emergency centre (n=81; 4.1%), oncology (n=51; 2.6%), the cardiothoracic division (n=21; 1.1%), dermatology (n=20; 1%), urology (n=19; 1%), nephrology (n=15; 0.8%), and neurosurgery (n=10; 0.5%). Data were missing for six patients.

\*"Other" includes endocrinology, family medicine, haematology, hepatology, immunology, infectious diseases, intensive care, ophthalmology, otorhinolaryngology and respiratory medicine.

A similar distribution of referrals from the different divisions was seen for each year of the study.

- Insert Table 2 here-

### **7. Reasons for Referral**

The main reason for referral was “other reasons unspecified” (n=402; 20.3%). These reasons included suspected eating disorders, consults for complex psychopharmacology in medically ill patients, advice for medication changes, diagnostic review, food refusal, poor adherence to treatment, traumatic brain injury, suspected conversion disorder, suspected catatonia, confusion, suspected personality disorders, psychiatric disorders presenting as physical symptoms, social problems and suspected factitious, gender identity, or dissociative disorders. Other reasons for referral included suicide/risk assessment (suicidal ideation and non-fatal suicidal behaviour) (n=333; 16.8%), current symptoms of mental illness: other (new and current psychiatric symptoms) (n=264; 13.3%), current symptoms of mental illness: depression (n=236; 11.9%), known with mental illness: review (a history of psychiatric illness) (n=213; 10.8%), capacity assessment (n=152; 7.7%), behavioural problems in the ward (n=126; 6.4%), substance-use problem (n=111; 5.6%), current symptoms of mental illness: psychosis (n=54; 2.7%), query diagnosis of delirium (n=39; 2%), and refusal of hospital treatment (coded separately from capacity assessment in this study) (n=18; 0.9%). Data were missing for 29 patients.

Of the three divisions that referred most frequently, the commonest reason for referral by internal medicine was suicide/risk assessment (n=135; 22.2%). Obstetrics and gynaecology most commonly referred to CLP for “other reasons not specified” (n=50; 17.7%) and substance-use problems (n=42; 14.9%). Surgery referred most frequently for current symptoms of mental illness: depression, and “other reasons not specified” (n=37; 18.1% each).

- Insert Table 3 here-

### **8. Association Between Reason for Referral and Source of Referral**

A chi-squared test for independence was conducted between the referring division and the reason for referral to determine if there was an association between the referring department and the reason for referral. There was found to be a statistically significant association between the referring department and the reason for referral,  $\chi^2(4) = 28.78$ ,  $p < 0.001$ . However, the association was small (Cohen 1988), Cramer's  $V = 0.18$ . It was found that from the internal medicine division, most referrals were for suicide risk/assessment ( $n=135$ ; 50.4%). From the division of surgery, the main reason for referral was current symptoms of mental illness: depression ( $n=37$ ; 43.5%). From the obstetrics and gynaecology division, the main reason for referral was current symptoms of mental illness: other ( $n=35$ ; 36.5%). Categories with smaller sample sizes were excluded from the chi-square analysis to prevent bias results.

### **9. Psychiatric Diagnoses**

The psychiatric diagnoses made in referred patients included depression ( $n=367$ ; 18.6%), substance abuse ( $n=202$ ; 10.2%), adjustment disorder ( $n=200$ ; 10.1%), schizophrenia and other psychotic disorders ( $n=189$ ; 9.6%), other (184; 9.3%), neurodevelopmental disorder ( $n=139$ ; 7%), personality disorder ( $n=117$ ; 5.9%), bipolar mood disorder ( $n=94$ ; 4.8%), somatic symptom disorder ( $n=46$ ; 2.3%), anxiety disorder ( $n=34$ ; 1.7%), delirium or dementia ( $n=22$ ; 1.1%), post-traumatic stress disorder ( $n=22$ ; 1.1%), dissociative disorder ( $n=8$ ; 0.4%), and obsessive compulsive and related disorders ( $n=1$ ; 0.1%). No mental disorder was diagnosed in 17.3% ( $n=343$ ) of patients. For ten of the referrals, there were missing data for psychiatric diagnosis and these data were not analysed. If the psychiatric diagnosis evolved over time, then the final psychiatric diagnosis was used for the analysis.

- Insert Table 4 here-

## **10. Immediate Management**

Immediate management mostly consisted of medication initiation or adjustment (n=793; 40.1%), followed by supportive counselling/psychoeducation, which included motivational interviewing (n=511; 25.8%). Other immediate management steps included other/unspecified (n=290;14.7%), further medical investigation (n=58; 2.9%), certification under the mental health care act (n=29; 1.5%), a countertransference issue (n=22; 1.1%), and family intervention (including education and gaining collateral) (n=12; 0.6%). Only one immediate management step was captured on the data sheets. Multiple management steps were not included in the data.

## **11. Association Between Psychiatric Diagnosis and Immediate Management**

A chi-squared test for independence was conducted between psychiatric diagnosis and immediate management for the top three psychiatric diagnoses and the top two interventions. There was found to be a statistically significant association between the psychiatric diagnosis of depression and its immediate management which included medication initiation in 71.2% (n=210) of patients with depression and supportive counselling/psychoeducation in 28.8% (n=85) of depressed patients ( $p < 0.001$ ). There was also a statistically significant association between the diagnosis of adjustment disorder and immediate management which included supportive counselling/psychoeducation in 70.7% (n=104) of patients with adjustment disorder and medication initiation/adjustment in 29.3% (n=43) of patients with adjustment disorder ( $p < 0,001$ ). Categories with smaller sample sizes (including the other psychiatric diagnoses) were excluded from the chi-squared analysis to prevent bias results.

## **12. Substance-Use Disorders**

Data were missing for 178 of all patients with respect to current substance use. Of the available data, 26% (n=515) of patients were currently using substances. Of those who used substances, most patients used several substances (n=174; 33.8%), followed by alcohol (n=114; 22.1%), heroin (n=73;

14.2%), methamphetamine (n=38; 7.4%), cannabis (n=37; 7.2%), sleeping tablets/benzodiazepines/Z-drugs/pain medication (n=21; 4.1%), methaqualone (n=5; 1%), and cocaine/ecstasy (n=1; 0.2%).

### **13. Medical Diagnosis**

The commonest category under medical diagnosis in referred patients was unspecified (n=747; 37.8%). Other medical diagnoses included neurological disease (n=188; 9.5%), malignancy (n=135; 6.8%), obstetric/gynaecological problem (n=127; 6.4%), diabetes (n=119; 6%), orthopaedic problem (n=117; 5.9%), overdose/poisoning/toxicity (n=94; 4.8%), pregnancy (n=79; 4%), thoracic/abdominal surgical disease (n=66; 3.3%), infectious disease (n=81; 4.1%), renal/genitourinary disease (n=50; 2.5%), gastrointestinal (GIT) disease (n=33; 1.7%), thyroid disorder (n=18; 0.9%), neurosurgical disease (n=12; 0.6%), and cardiovascular disease (n=6; 0.3%). There were missing data for the medical diagnoses of 106 patients and these data were not analysed.

- Insert Table 5 here -

### **14. Social Problems**

Data were missing for 1078 patients (54.5%). Significant social problems were present in 45.5% (n=900) of referrals. The most common social problems besides “other” (n=506; 25.6%), were relationship problems (n=171; 8.6%) and financial stress (n=58; 2.9%). Other social problems included homelessness (n=56; 2.8%), unemployment (n=56; 2.8%), and abuse/neglect (n=53; 2.7%).

### **15. Risk**

Risk included danger to self and danger to others. This was distinguished from the category “behavioural problems on the ward” in that risk was determined by the CLP doctor and “behavioural problems on the ward” was a category for “reason for referral” decided upon by the referring division. Data were missing for 446 patients. Of those that were recorded, the largest group of patients were not a risk to self (n=790; 39.9%). Of those who were classified as being a risk to self,

most were low risk (n=324; 16.4%). Of the minority of patients who were a risk to others (n=486; 24.6%), most were low risk (n=414; 20.9%). Of those patients classified as being at risk to self or others, the commonest specified reason for risk was overdose (n=74; 9.9%), non-fatal suicidal behaviour and suicidal ideation (n=72; 9.6% combined). The reason for there being a much higher number of referrals for suicide/risk assessment (n=333; 16.8%) than for the risk assessment pointing to risk due to poisoning/overdose (n=74; 9.9%) is not due to other methods of non-fatal suicidal behaviour, but because not all suicide/risk assessments were conducted after a suicide attempt. Some suicide/risk assessments were for suicidal ideation in the ward. Risk was determined clinically.

#### **16. Referral by CLP after Assessment**

With respect to referral of patients after psychiatric consult, many were not referred to other divisions or disciplines (n=591; 29.9%). A significant minority were referred to another medical division (n=314; 15.9%), and others were referred to social work (n=274; 13.2%), psychology (n=220; 11.1%), neurology (n=16; 0.8%), speech/audio therapists (n=5; 0.3%), and dietician (n=5; 0.3%). Data were missing for 553 patients.

#### **17. Concordance of Referrer and Psychiatrist Diagnosis**

Descriptive statistics (frequency tables) were used to determine the concordance of referrer and psychiatric diagnosis. Most patients who were referred for a substance-use problem were diagnosed with a substance-use disorder (n=79; 71.2%). Most patients who were referred for “known with mental illness: review” were diagnosed with schizophrenia and other psychotic disorders (n=102; 47.9%). Most patients who were referred for refusal of hospital treatment were diagnosed with other disorders not specified (n=6; 33.3%). Most patients who were referred for capacity assessment were diagnosed with a neurodevelopmental disorder (n=34; 22.2%). Most patients who were referred for query diagnosis of delirium were diagnosed with no mental illness (n=13; 33.3%). Most patients who were referred for suicide/risk assessment were diagnosed with depressive disorder (n=92; 27.6%). Most patients who were referred for current symptoms of

mental illness: psychosis, were diagnosed with other disorders not specified (n=13; 24.1%). Most patients who were referred for current symptoms of mental illness: depression, were diagnosed with depressive disorder (n=99; 41.9%). Most patients who were referred for current symptoms of mental illness: other were diagnosed with no mental disorder (n=47; 17.8%). Most patients who were referred for behavioural problems in the ward were diagnosed with no mental disorder (n=25; 19.8%). Most patients who were referred for other reasons not specified were diagnosed with no mental disorder (n=97; 24.1%).

### **18. Outcome After Psychiatric Assessment**

Over the full period of the study, 61 patients (3.1%) absconded or demised. Of the patients who were transferred to a psychiatric ward at GSH (n=196; 9.9%), most (n=123; 6.2%) were admitted to the emergency psychiatric ward, followed by the therapeutic ward (n=73; 3.7%). Other referrals included to a tertiary psychiatric service (n=67; 3.5%), a rehabilitation unit (n=64; 3.2%), neuropsychiatry (n=54; 2.7%), and neurology (n=13; 0.7%). The rehabilitation unit could be either for substance abuse or for physical rehabilitation. For follow-up, 20.2% (n=399) of patients were referred to the community psychiatry clinic, 9.9% (n=195) to the adult tertiary psychiatric outpatient division, and 1.8% (n=35) to the tertiary child and adolescent psychiatric outpatient division.

## DISCUSSION

This study demonstrated that the overall number of referrals to the division of CLP increased from 2014 to 2018. It is unclear why there was a decrease in referral number in 2015 and again in 2017 and this is a limitation in the study. The increase in the number of referrals seen in this study could be due to an increased awareness of the service, improved detection of psychiatric symptoms in medical or surgical patients, or an increase in mental health conditions in the population. A limitation of the study is that there are no data for the total number of hospital admissions and thus the rate of referrals could not be analysed. If the total number of hospital admissions increased over the study period, then this could account for the rise in the number of referrals to CLP.

The mean time from initial hospital admission to CLP referral was 7.48 days. This is a relatively long delay, which is concerning since earlier psychiatric consultation has been correlated with shorter hospital stays<sup>4</sup>. The maximum time from hospital admission to CLP referral of 116 days is not an outlier. Every year saw some referrals only made to CLP after 98 to 116 days. This is because many referred patients had undergone surgical procedures and developed multiple post-surgical complications, or were admitted for a long stay in the intensive care unit and developed a mental disorder, such as depression, during and as a result of their long stay in hospital and their medical comorbidities.

The mean time from CLP referral to time of first psychiatric assessment, however, is promising at 0.48 days. Most patients were seen within a day of referral. There was a slight increase in the time from referral to assessment between 2017 (0.3 days) and 2018 (0.42 days) and the reason for this is not known and is another study limitation.

Referred patients were mainly in their mid-30s (mean age 36.68 years). The majority of patients were female (n=1182; 60.6%) and this is comparable to other African studies which have found the female population referred to be in the range of 53%<sup>13</sup> to 61%<sup>14</sup>. There were no data for other

demographic details such as ethnicity, marital status, number of children, highest level of education, employment, religion, or languages spoken and this is a study limitation.

In the current study, internal medicine was shown to refer most frequently (n=607; 30.7%), followed by obstetrics and gynaecology (n=282; 14.3%), and surgery (n=204; 10.3%). The referral source is important because it gives an indication into the visibility of the CLP service to other divisions, as well as providing information as to the divisions where psychiatric comorbidity commonly exists. It also provides information with respect to frequent referrers. This information could be used to improve the service by setting up regular meetings between the frequent referrers and the CLP division which would provide an opportunity for clear communication between divisions. It could motivate the division to develop an outpatient program to manage these patients after discharge from hospital. One could also set up training opportunities such as how to manage delirium, if this is a frequent diagnosis in referred patients.

The main reasons for referral overall were for suicide/risk assessment, symptoms of mental illness: depression, and "other". The reasons for referral are in keeping with Gangat et al's 1985 Durban study which found 24% of patients referred for non-fatal suicidal behaviour and 13% for major depressive disorder<sup>9</sup>. The relatively lower contribution of referrals for suicide assessment in this study may be because these referrals are primarily assessed by the emergency psychiatric team at GSH.

Referrals for substance-use were recorded as contributing 5.7%, but substance users accounted for 26% of the referred population. A similar finding to this in the African literature is the finding of 7% of referrals for alcohol use in Durban in 1985<sup>9</sup>. South Africa has a high burden of substance-use disorders (13.4%)<sup>15</sup> and the fact that other divisions did not refer frequently for substance use problems may reflect a lack of detection by other treating professionals, or may be due to the stigma frequently associated with substance users. Other studies also found low rates of substance use detection. Drake et al found that substance use disorders are frequently not detected in the acute

psychiatric setting<sup>16</sup>, and Mallin et al determined that only 24.5% of patients with depression were evaluated for substance use by family physicians<sup>17</sup>. Furthermore, many patients minimize or deny their substance use<sup>18</sup>. It has also been shown that many health care workers have a negative attitude towards substance-using patients<sup>19</sup>. A limitation in the study is that there are no specific data with respect to referrals to substance rehabilitation facilities given the high burden of substance-use.

The finding that 26% (n=515) of patients were found to be using substances and only 3.2% (n=64) were referred to a rehabilitation unit (which could be either for substances or for physical rehabilitation) is likely due to the fact that patients seen were in a stage of change that was not conducive to substance rehabilitation.

A possible reason why most referrals from internal medicine were for suicide/risk assessment (n=135; 50.4%) is that the commonest method of deliberate self-harm is poisoning<sup>20</sup> and, unless surgical complications arise, poisoning is usually treated by the internal medicine division. It is unclear why the division of surgery mostly referred for depressive symptoms (n=37; 43.5%) and why obstetrics and gynaecology mostly referred for other symptoms of mental illness (n=35; 36.5%) and this is a study limitation.

It is important to note any association between the referring division and the reason for referral because this gives insight into the psychiatric disorders comorbid with other medical disorders, provides information as to which psychiatric symptoms are noted by different divisions, helps the CLP division to understand the needs of the referring divisions, and provides information that can be used for training purposes.

The most common psychiatric diagnoses made were depression, substance abuse, and adjustment disorders. Depression was diagnosed in 18.6% of referred patients (n=367) and this is similar to other studies showing that depression is one of the most common illnesses referred to CLP (13% - 20%)<sup>9-10</sup>.

Only a minority of patients were diagnosed by CLP with delirium or dementia (1.1%, n=22). The CLP team has performed extensive education on the detection and management of delirium at GSH, therefore this low percentage may be due to clinicians feeling confident at diagnosing and managing delirium without psychiatric intervention (and therefore not referring these patients to CLP). This is promising as delirium is a medical emergency that is often missed<sup>21</sup>. It may also be, however, that hypoactive delirium is being missed by the referring divisions. Other studies in Africa have found higher rates of delirium in the CLP service of 12%<sup>10</sup> to 32%<sup>22</sup>. Delirium, being a medical emergency, may also be referred more frequently to the emergency service and thus, due to the structure of psychiatry at GSH, these results would need to be treated with caution.

An interesting finding in this study, which replicates the results of the studies from the literature review, is the fact that 17.3% (n=343) of referred patients received no psychiatric diagnosis. Previous African literature found that the percentage of referred patients with no psychiatric diagnosis was between 17%<sup>10,22</sup> and 26%<sup>14</sup>. These referrals consisted of certain capacity assessments, suicidal ideation, interpersonal difficulties between patients and the treating team and medically unexplained symptoms. In the case where no psychiatric diagnosis was made, the patient and treating team were assisted with counselling and psychoeducation. The high percentage of patients found not to have a psychiatric diagnosis may also be due to the high prevalence of social problems (n=900; 45.5%) in the referred population. Despite this, only a minority of patients were referred to the social worker (n=274; 13.9%). This may be due to the scarcity and thus limited availability of the social workers and a perception that there is not much that can be provided to assist the many patients with social difficulties in the area.

The main psychiatric interventions included medication initiation/adjustment and supportive counselling. In this study, medication was prescribed in 40.1% of referred patients (n=793). In other studies that examined this variable, medication was prescribed in 38%<sup>9</sup>, and 62%<sup>22</sup> of the referred

sample, thus this is a fairly comparable finding. Counselling was provided to 25.8% of patients in this study (n=511). Previous studies provided counselling for slightly fewer patients: 18%<sup>9</sup> and 25%<sup>22</sup>.

The commonest specified medical diagnoses included neurological illness, malignancies, and obstetric/gynaecological disorders.

Just under 10% of referred patients were admitted to a psychiatric ward within GSH (n=196; 9.9%), and 23.5% were referred to either the community clinic or tertiary outpatient psychiatric services for follow up (n=465).

Further limitations of this study are that HIV and emergency referrals were excluded as they are managed by different services. Also, the length of hospital stay was not analysed. There was no control group to measure the effect of CLP intervention on length of hospital stay.

CLP teams work differently at different hospitals. This study is generalisable to other tertiary hospitals in South Africa but not to secondary or district hospitals. The reliability of the data of this study was determined by the accurate completion of the data sheets (in which data were missing), as no files were reviewed. This is another limitation of the study.

In summary, the division is functioning well (as confirmed by the short time from referral to patient review) despite the increasing number of referrals. Future studies, including the referrals of HIV positive and other neuropsychiatric conditions, referrals from the emergency centre, as well as a control group, would improve the knowledge of the CLP service at GSH.

## CONCLUSION

The CLP service at GSH has grown over the past 5 years. The characteristics of referrals are largely unchanged from 2014 to 2018. The relatively long time period from initial hospital admission to CLP referral could be reduced by improving the visibility of the CLP service. Considering the growth of the service, it may be prudent to increase the number of staff within the division to meet the need and to continue to assess patients in under a day from the time of referral. Further studies are needed to assess the rate of referrals from the emergency division and the neuropsychiatric service and to assess how psychiatric consultation affects length of hospital stay.

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## DISCLOSURES

There are no disclosures.

## REFERENCES

1. Vythilingum B and Chiliza B. Consultation liaison psychiatry in Africa – essential service or unaffordable luxury? *Afr J Psychiatry (Johannesbg)* 2011; 14: 257. DOI: 10.4314/ajpsy.v14i4.1
2. Chen KY, Evans R and Larkins S. Why are hospital doctors not referring to Consultation-Liaison Psychiatry? – a systematic review. *BMC Psychiatry* 2016; 16: 390. 20161109. DOI: 10.1186/s12888-016-1100-6.
3. Aghanwa H and Morakinyo O. Psychiatric complications of haemodialysis at a kidney centre in Nigeria. *Journal of psychosomatic research* 1997; 42: 445-451.
4. Saravay SM and Lavin M. Psychiatric comorbidity and length of hospital stay in the general hospital. A critical review of outcome studies. *Psychosomatics* 1994; 35: 233-252. DOI: 10.1016/s0033-3182(94)71772-2.
5. Wood R and Wand AP. The effectiveness of consultation-liaison psychiatry in the general hospital setting: a systematic review. *J Psychosom Res* 2014; 76: 175-192. 20140113. DOI: 10.1016/j.psychores.2014.01.002.
6. Gitlin DF, Levenson JL and Lyketsos CG. Psychosomatic medicine: a new psychiatric subspecialty. *Acad Psychiatry* 2004; 28: 4-11. DOI: 10.1176/appi.ap.28.1.4.
7. Kariem S. Groote Schuur Hospital Fast Facts [homepage on the internet]. c2009 [updated 2009 January; cited 30 April 2022] Available from: [http://www.westerncape.gov.za/text/2009/3/fast\\_facts\\_gsh\\_jan09.pdf\(2009, 2020\)](http://www.westerncape.gov.za/text/2009/3/fast_facts_gsh_jan09.pdf(2009, 2020)).
8. Torline J. In-patient referrals to consultation-liaison psychiatry at a tertiary hospital in South Africa. University of Cape Town, 2016.
9. Gangat AE, Naidoo LR and Simpson MA. Referral patterns for psychiatric consultation in a large general hospital. *S Afr Med J* 1987; 72: 853-855.

10. Tema NS and van Rensburg AJ. Psychiatric consultations and the management of associated comorbid medical conditions in a regional referral hospital. *South African Journal of Psychiatry* 2015; 21: 67-72.
11. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Washington, DC: American Psychiatric Association; 1994.
12. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013.
13. Rukundo ZG, Musisi S and Nakasujja N. Psychiatric morbidity among physically ill patients in a Ugandan Regional Referral Hospital. *Afr Health Sci* 2013; 13: 87-93. DOI: 10.4314/ahs.v13i1.13.
14. Adeyemi JD. In-patient psychiatric referrals in a teaching hospital: a case controlled report. *J Psychosom Res* 1996; 41: 427-433. DOI: 10.1016/s0022-3999(96)00194-8.
15. Stein DJ, Seedat S, Herman A, et al. Lifetime prevalence of psychiatric disorders in South Africa. *British Journal of Psychiatry* 2008; 192: 112-117. 2018/01/01. DOI: 10.1192/bjp/bp.106.029280.
16. Drake RE, Alterman AI and Rosenberg SR. Detection of substance use disorders in severely mentally ill patients. *Community Ment Health J* 1993; 29: 175-192; discussion 193-174. 1993/04/01. DOI: 10.1007/bf00756343.
17. Mallin R, Scott K, Tumblin M, et al. Detection of substance use disorders in patients presenting with depression. *Subst Abus* 2002; 23: 115-120. 2002/11/22. DOI: 10.1080/08897070209511481.
18. Wooley CN, Rogers R, Fiduccia CE, et al. The effectiveness of substance use measures in the detection of full and partial denial of drug use. *Assessment* 2013; 20: 670-680. 2012/05/24. DOI: 10.1177/1073191112447098.
19. van Boekel LC, Brouwers EP, van Weeghel J, et al. Stigma among health professionals towards patients with substance use disorders and its consequence for healthcare delivery:

systematic review. *Drug Alcohol Depend* 2013; 131: 23-35. 2013/03/16. DOI:  
10.1016/j.drugalcdep.2013.02.018.

20. Pieterse D, Hoare J, Louw K-A, et al. Methods of deliberate self-harm in a tertiary hospital in South Africa. *2020* 2020; 26. deliberate self-harm; non-fatal suicide; general hospital; mental health; methods of self-harm; means restriction; suicide prevention 2020-01-20. DOI: 10.4102/sajpsychiatry.v26i0.1399.
21. de la Cruz M, Fan J, Yennu S, et al. The frequency of missed delirium in patients referred to palliative care in a comprehensive cancer center. *Supportive Care in Cancer* 2015; 23: 2427-2433. DOI: 10.1007/s00520-015-2610-3.
22. Ajiboye PD and Adelekan ML. A prospective analysis of in-patient consultation-liaison psychiatry in a Nigerian teaching hospital. *East Afr Med J* 2004; 81: 620-625. DOI: 10.4314/eamj.v81i12.9246.

## TABLES

<b>Table 1</b>		
<b>Number and percentage of total referrals per year</b>		
<b>Year</b>	<b>Number</b>	<b>Percentage</b>
<b>2014</b>	357	18
<b>2015</b>	347	17.5
<b>2016</b>	412	20.8
<b>2017</b>	350	17.7
<b>2018</b>	499	25.2
<b>Missing</b>	13	0.7
<b>Total</b>	<b>1978</b>	<b>100</b>

<b>Table 2</b>	
<b>Referral Source</b>	
<b>Division</b>	<b>Frequency n (%)</b>
Internal Medicine	607 (30.7)
Other	282 (14.3)
Obstetrics and Gynaecology	282 (14.3)
Surgery	204 (10.3)
Neurology	182 (9.2)
Paediatrics	103 (5.2)
Orthopaedics	95 (4.8)
Casualty	81 (4.1)
Oncology	51 (2.6)
Cardiothoracic	21 (1.1)
Dermatology	20 (1)
Urology	19 (1)
Renal	15 (0.8)
Neurosurgery	10 (0.5)
Missing	6 (0.3)

<b>Table 3</b>	
<b>Reasons for Referral</b>	
<b>Reason</b>	<b>Frequency n (%)</b>
Other	402 (20.3)
Suicide / risk assessment	333 (16.8)
Current symptoms of mental illness: other	264 (13.3)
Current symptoms of mental illness: depression	236 (11.9)
Known with mental illness, review	213 (10.8)
Capacity assessment	153 (7.7)
Behavioural problems in ward	126 (6.4)
Substance-use problem	111 (5.6)
Current symptoms of mental illness: psychosis	54 (2.7)
Query diagnosis of delirium	39 (2.0)
Refusal of hospital treatment	18 (0.9)
Missing	29 (1.5)

<b>Table 4</b>	
<b>Psychiatric Diagnoses</b>	
<b>Diagnosis</b>	<b>Frequency n (%)</b>
Depressive disorder	367 (18.6)
No mental illness	343 (17.3)
Substance-use disorder	202 (10.2)
Adjustment disorder	200 (10.1)
Schizophrenia and other psychotic disorders	189 (9.6)
Other	184 (9.3)
Neurocognitive disorder	139 (7.0)
Personality disorder	117 (5.9)
Bipolar mood disorder	94 (4.8)
Somatic symptom disorder	46 (2.3)
Anxiety disorder	34 (1.7)
Delirium or dementia	22 (1.1)
Post-traumatic stress disorder	22 (1.1)
Dissociative disorder	8 (0.4)
Obsessive compulsive and related disorders	1 (0.1)
Missing	10 (0.5)

<b>Table 5</b>	
<b>Medical Diagnoses</b>	
<b>Diagnosis</b>	<b>Frequency n (%)</b>
Other	747 (37.8)
Neurological disease	188 (9.5)
Malignancy	135 (6.8)
Obstetric / gynaecological problem	127 (6.4)
Diabetes	119 (6.0)
Orthopaedic problem	117 (5.9)
Overdose / poisoning / toxicity	94 (4.8)
Infectious disease	81 (4.1)
Pregnancy	79 (4.0)
Thoracic / abdominal surgical disease	66 (3.3)
Renal / genitourinary disease	50 (2.5)
Gastrointestinal disease	33 (1.7)
Thyroid disease	18 (0.9)
Neurosurgical disease	12 (0.6)
Cardiovascular disease	6 (0.3)
Missing	106 (5.4)

## CHAPTER 3 – OVERALL DISCUSSION

Consultation-liaison psychiatry is an important subspecialty of psychiatry because the timeous management of psychiatric comorbidity in patients admitted in hospital leads to shorter hospital stays<sup>1</sup>. CLP lies at the interface between psychiatry and the other divisions of medicine<sup>2</sup>. There is very little literature with respect to CLP within the African continent. Studies that have been published have small sample sizes, are mostly of short duration, and are mostly from ten or more years ago<sup>3-8</sup>. This study is an important contribution to the literature.

The rate of referral to CLP in the literature has been found to be between 0.48% and 1.8%<sup>3,6</sup> which reflects that a significant minority of admitted patients are referred. This referral rate, however, is still much lower than the rates of psychiatric comorbidity found in inpatients in Africa, which ranges from 20% to 55%<sup>9</sup>. This means that psychiatric comorbidity is often missed or else ignored.

In this investigation, the total number of patients referred to psychiatry during the study period was 1978. This large number improves the quality of the data. This investigation also looked at how the division has changed over time – an analysis not previously performed in the African literature. The study found that there was a change in the number of referrals from 2014 to 2018, which increased from 357 to 499 referrals. This increase was not linear. The least referrals were in 2015 (n=347). The reason for this is unclear and this is a study limitation.

The period from patient admission to patient referral to CLP was found to be quite broad with a minimum of 0 days and a maximum of 116 days. The mean was 7.48 days (SD, 12.09). The possible reasons for this were expanded on in the discussion section in chapter two.

The time period from CLP referral to CLP assessment was found to be narrow, with a minimum of 0 days, a maximum of 8 days, and a mean of 0.48 days (SD 0.91). This overall finding demonstrates the effectiveness of the CLP division.

There was no association between the number of referrals per department and the time-period between admission and referral, nor was there any association between the number of referrals per department and the time-period between CLP referral and CLP assessment.

Where studies analysed referral source, excluding the emergency centre, internal medicine was always the division that referred to CLP most frequently. This finding was replicated in this study where 30.7% (n=607) of referrals came from the internal medicine division over the five-year study period. The other African studies showed a range of 33%<sup>4</sup> - 70%<sup>3</sup> of referrals from internal medicine. The congruency between this study's finding and the findings of previous studies, adds weight to the result. Referrals from surgery accounted for between 5%<sup>4</sup> and 22%<sup>6</sup> of CLP referrals in previous studies, and accounted for 10.3% (n=204) in this study, which is also a comparable finding. The obstetrics and gynaecology division accounted for 4%<sup>3</sup> to 22%<sup>6</sup> of CLP referrals in the literature and 14.3% (n=282) in this study. Again, this is a comparable result. The differences between the frequencies of referrals for the three divisions above is likely explained by the relative sizes of the divisions for each hospital, as well as the overall visibility of CLP within the different hospitals.

A chi-squared analysis found a small, but significant, association between referral department and reason for referral. The obstetrics and gynaecology division's most frequent reason for referral was found to be "current symptoms of mental illness: other" (n=35; 36.5%). This result could be further analysed in subsequent studies to determine the nature of these "other" symptoms, which could provide an opportunity for training opportunities within the division.

In the studies examined for the literature review, the most frequent medical reason for hospital admission in referred patients was infectious (23%<sup>6</sup>-63%<sup>8</sup>), including HIV/AIDS. In this study, only 4.1% (n=81) of the medical diagnoses were specified as infectious. This large discrepancy may be because of differences in disease burden in different African countries. The fact that this study excluded HIV/AIDS referrals is also a likely contributor. It may also be because of the category choices on the data sheet, for example, "GIT disease" is an option for medical reason for admission

and this could be either infectious or non-infectious. This study may provide information on gaps in the data sheet which could lead to the improvement of this measurement tool and therefore improve any study replications.

The most frequent medical diagnosis of referred patients in this study was “unspecified” (n=747; 37.8%). Further studies are needed in order to elaborate on these specific diagnoses and this information may be incorporated into the data sheet as separate categories to improve data quality for subsequent studies analysing CLP at GSH.

The reasons for referral to CLP varied depending on how the studies categorized them in the different studies used in the literature review. A suicide attempt, or deliberate self-harm, is often a reason for referral in the literature (6%<sup>7</sup> - 24%<sup>3</sup>). In this investigation, the category “suicide/risk assessment” could refer to either an actual attempt or to suicidal thoughts while admitted in the ward, and this category accounted for 16.8% (n=333). This finding is in keeping with the literature but would likely have been significantly higher if referrals from the emergency centre were included.

The next largest category of reason for referral in this investigation was “current symptoms of mental illness: other”. The “other” excludes current symptoms of mental illness: depression, and current symptoms of mental illness: psychosis, as these were separate categories in this study. The “other” therefore would include neurodevelopmental disorders such as intellectual disability or autism, bipolar disorders (mania), anxiety disorders, obsessive compulsive disorders, trauma- and stressor-related disorders such as post-traumatic stress disorder, dissociative disorders, somatic symptom disorders, feeding and eating disorders, sleep-wake disorders, neurocognitive disorders, and personality disorders. If these disorders were specifically included in the data sheets as options for reasons for referral, then this would provide further clarity as to the types of current symptoms of mental disorder that are being referred.

Depressive symptoms are another common reason for referral both in the literature (13%<sup>3</sup>-20%<sup>4</sup>), and in this investigation (n=236; 11.9%). This is not an unexpected finding as the lifetime prevalence

of depression is nearly 20%<sup>10</sup> and research has demonstrated that many medical illnesses are associated with depression<sup>11</sup>.

Depression is also a frequently prescribed diagnosis by psychiatry after consultation of referred patients in the African literature (8%<sup>5</sup>-34%<sup>8</sup>). The diagnosis of depression was made in 18.6% (n=367) of referred patients in this study – the single largest category of diagnoses. The discrepancy between the percentage of patients referred for depression in this study (n=236; 11.9%), and the percentage of patients diagnosed with depression by CLP (n=367; 18.6%) shows a possible opportunity for training the other divisions on how to recognise and manage depression symptoms in their patients.

The second largest category of psychiatric diagnoses was substance-use disorders (n=202; 10.2%). Substance-use problems were, however, only the reason for referral in 5.6% (n=111) of referred patients. This means that for this study, for nearly half of referred patients who had substance-use disorders, the disorder was not identified or noted on their referrals. This is another potential training opportunity for the hospital divisions. Substance use problems accounted for 5%<sup>8</sup>-12%<sup>3</sup> of diagnoses in the African literature – a comparable finding to this study.

In the African literature, medication was prescribed in 38%<sup>3</sup> - 62%<sup>7</sup> of referred patients, and in this study, medication was initiated or adjusted in 40.1% (n=793). This is a similar finding. Of the referrals seen by the division of CLP, 25.8% (n=511) primarily received supportive counselling/psychoeducation including motivational interviewing. This result is similar to that found in the literature in studies that included this category which found a percentage of 18%<sup>3</sup> to 25%<sup>7</sup> of patients receiving therapy or counselling. This finding suggests that there may be a place for direct referral to psychology, without involving psychiatry, in a significant proportion of referrals.

With respect to outcomes, 3.1% (n=61) of referred patients demised or absconded. In the only study that examined deaths in the referred population, 19% demised<sup>7</sup> – a much higher percentage. This

could be because of the much higher rate of delirium in the referred population (33%<sup>7</sup> versus 1.1% in this study).

The percentage of patients who were transferred and admitted to psychiatric wards was 9.9% (n=196) which is similar to the finding of 11% in the literature<sup>7</sup>. For follow-up, most patients were referred to the community clinic (n=399; 20.2%). Other follow-up outcomes included referral to the adult tertiary psychiatric outpatient division (n=195; 9.9%), and referral to the adolescent tertiary psychiatric outpatient division (n=35; 1.8%). In the literature, only referrals to the psychiatric outpatient division were analysed and this rate was 26%<sup>7</sup>.

The various differences and similarities between the findings in the African literature regarding CLP and the findings of this investigation have been described. It is clear that this study is significantly broader in scope than previous studies. The generalizability of this study is limited to other tertiary institutions as CLP is conducted differently at different levels of hospitals. Improvements in the data have been described and this study has opened the door for future research into CLP within the African context.

## REFERENCES

1. Wood R and Wand AP. The effectiveness of consultation-liaison psychiatry in the general hospital setting: a systematic review. *J Psychosom Res* 2014; 76: 175-192. 20140113. DOI: 10.1016/j.jpsychores.2014.01.002.
2. Chen KY, Evans R and Larkins S. Why are hospital doctors not referring to Consultation-Liaison Psychiatry? - a systemic review. *BMC Psychiatry* 2016; 16: 390. 20161109. DOI: 10.1186/s12888-016-1100-6.
3. Gangat AE, Naidoo LR and Simpson MA. Referral patterns for psychiatric consultation in a large general hospital. *S Afr Med J* 1987; 72: 853-855.
4. Tema NS and van Rensburg AJ. Psychiatric consultations and the management of associated comorbid medical conditions in a regional referral hospital. *South African Journal of Psychiatry* 2015; 21: 67-72.
5. Adeyemi JD. In-patient psychiatric referrals in a teaching hospital: a case controlled report. *J Psychosom Res* 1996; 41: 427-433. DOI: 10.1016/s0022-3999(96)00194-8.
6. Aghanwa HS, Morakinyo O and Aina OF. Consultation-liaison psychiatry in a general hospital setting in west Africa. *East Afr Med J* 1996; 73: 133-136.
7. Ajiboye PO and Adelekan ML. A prospective analysis of in-patient consultation-liaison psychiatry in a Nigerian teaching hospital. *East Afr Med J* 2004; 81: 620-625. DOI: 10.4314/eamj.v81i12.9246.
8. Rukundo ZG, Musisi S and Nakasujja N. Psychiatric morbidity among physically ill patients in a Ugandan Regional Referral Hospital. *Afr Health Sci* 2013; 13: 87-93. DOI: 10.4314/ahs.v13i1.13.
9. Aghanwa H and Morakinyo O. Psychiatric complications of hemodialysis at a kidney center in Nigeria. *Journal of psychosomatic research* 1997; 42: 445-451.

10. Kessler RC, McGonagle KA, Zhao S, et al. Lifetime and 12-Month Prevalence of DSM-III-R Psychiatric Disorders in the United States: Results From the National Comorbidity Survey. *Archives of General Psychiatry* 1994; 51: 8-19. DOI: 10.1001/archpsyc.1994.03950010008002.
11. Katon W, Lin EHB and Kroenke K. The association of depression and anxiety with medical symptom burden in patients with chronic medical illness. *General Hospital Psychiatry* 2007; 29: 147-155. DOI: <https://doi.org/10.1016/j.genhosppsy.2006.11.005>.

## APPENDIX A – Additional Tables Not Included in Manuscript

<b>Number of days from admission to hospital to CLP referral per year</b>			
<b>Date</b>	<b>Mean</b>	<b>Minimum</b>	<b>Maximum</b>
<b>2014</b>	7.17	0	106
<b>2015</b>	7.47	0	101
<b>2016</b>	6.82	0	98
<b>2017</b>	8.96	0	116
<b>2018</b>	7.06	0	114

<b>Number of days from CLP referral to CLP assessment per year</b>			
<b>Year</b>	<b>Mean</b>	<b>Minimum</b>	<b>Maximum</b>
<b>2014</b>	0.65	0	8
<b>2015</b>	0.62	0	6
<b>2016</b>	0.41	0	5
<b>2017</b>	0.30	0	6
<b>2018</b>	0.42	0	7

<b>Ages of Referred Patients Per Year</b>				
<b>Year</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>SD</b>
<b>2014</b>	6	95	38.25	18.292
<b>2015</b>	5	80	37.13	17.031
<b>2016</b>	11	83	38.79	17.584

<b>2017</b>	11	82	37.24	15.807
<b>2018</b>	5	79	33.36	15.760

<b>Gender of referred Patients Per Year</b>		
<b>Year</b>	<b>Frequency n (%) Females</b>	<b>Frequency n (%) Males</b>
<b>2014</b>	216 (60.5)	133 (37.3)
<b>2015</b>	209 (60.2)	133 (38.3)
<b>2016</b>	256 (62.1)	151 (37.6)
<b>2017</b>	203 (58.0)	139 (39.7)
<b>2018</b>	293 (58.7)	204 (40.9)
<b>Average</b>	1182 (59.8)	767 (38.8)
<b>Missing</b>	29 (1.5)	

<b>Commonest Sources of Referral per Year</b>		
<b>Year</b>	<b>Division</b>	<b>Frequency n (%)</b>
<b>2014</b>	Internal Medicine	145 (40.6)
	Obstetrics and Gynaecology	55 (15.4)
	Surgery	44 (12.3)
<b>2015</b>	Internal Medicine	125 (36.0)
	Obstetrics and Gynaecology	48 (13.8)
	Surgery	51 (14.7)
<b>2016</b>	Internal Medicine	152 (36.9)
	Obstetrics and Gynaecology	54 (13.1)
	Surgery	36 (8.7)

<b>2017</b>	Internal Medicine	84 (24.0)
	Obstetrics and Gynaecology	56 (16.0)
	Surgery	41 (11.7)
<b>2018</b>	Internal Medicine	97 (19.4)
	Obstetrics and Gynaecology	69 (13.8)
	Surgery	30 (6.0)

<b>Commonest Reasons for Referral per Year</b>		
<b>Year</b>	<b>Reasons for Referral</b>	<b>Frequency n (%)</b>
<b>2014</b>	Suicide risk/assessment	51 (14.3)
	Current symptoms of mental illness: other	80 (22.4)
	Current symptoms of mental illness: depression	38 (10.6)
<b>2015</b>	Suicide risk/assessment	42 (12.1)
	Current symptoms of mental illness: other	71 (20.5)
	Current symptoms of mental illness: depression	35 (10.1)
<b>2016</b>	Suicide risk/assessment	67 (16.3)
	Current symptoms of mental illness: other	75 (18.2)
	Current symptoms of mental illness: depression	33 (8.0)
<b>2017</b>	Suicide risk/assessment	56 (16.0)

	Current symptoms of mental illness: other	18 (5.1)
	Current symptoms of mental illness: depression	62 (17.7)
<b>2018</b>	Suicide risk/assessment	114 (22.8)
	Current symptoms of mental illness: other	19 (3.8)
	Current symptoms of mental illness: depression	67 (13.4)

<b>Reason for Referral per Year Split by Top Three Referring Divisions</b>			
<b>Year</b>	<b>Division</b>	<b>Reason for Referral</b>	<b>Frequency n (5)</b>
<b>2014</b>	Internal Medicine	Suicide/risk assessment and current symptoms of mental illness: other	30 (20.7) each
	Obstetrics and Gynaecology	Current symptoms of mental illness: other	10 (18.2)
	Surgery	Current symptoms of mental illness: other	11 (25)
<b>2015</b>	Internal Medicine	Known with mental illness, review	23 (18.4)
	Obstetrics and Gynaecology	Current symptoms of mental illness: other	12 (25.0)

	Surgery	Other reasons unspecified	14 (27.5)
<b>2016</b>	Internal Medicine	Suicide / risk assessment	38 (25.0)
	Obstetrics and Gynaecology	Substance-use problem and other reasons unspecified	11 (20.4) each
	Surgery	Other reasons unspecified	12 (33.3)
<b>2017</b>	Internal Medicine	Suicide/risk assessment	18 (21.4)
	Obstetrics and Gynaecology	Other reasons unspecified	14 (25.0)
	Surgery	Current symptoms of mental illness: depression	11 (26.8)
<b>2018</b>	Internal Medicine	Suicide/risk assessment	31 (32.0)
	Obstetrics and Gynaecology	Other reasons unspecified	13 (18.8)
	Surgery	Current symptoms of mental illness: depression	11 (36.7)

<b>Immediate Management by Year</b>				
<b>Year</b>	<b>Commonest Immediate Management</b>	<b>Frequency n (%)</b>	<b>Second Most Common Immediate Management</b>	<b>Frequency n (%)</b>
<b>2014</b>	Medication initiation / adjustment	145 (40.6)	Supportive counselling / psychoeducation	125 (35.0)
<b>2015</b>	Medication initiation / adjustment	148 (42.7)	Supportive counselling / psychoeducation	98 (28.2)
<b>2016</b>	Supportive counselling / psychoeducation	149 (36.2)	Medication initiation / adjustment	140 (34.0)
<b>2017</b>	Medication initiation / adjustment	179 (51.1)	Supportive counselling / psychoeducation	50 (14.3)
<b>2018</b>	Medication initiation / adjustment	178 (35.7)	Supportive counselling / psychoeducation	87 (17.4)

<b>Patients currently using substances per year</b>	
<b>Year</b>	<b>Using substances frequency n (%)</b>
<b>2014</b>	92 (25.8)
<b>2015</b>	79 (22.8)
<b>2016</b>	104 (25.2)
<b>2017</b>	109 (31.1)
<b>2018</b>	124 (24.8)

<b>Main substances used per year</b>		
<b>Year</b>	<b>Main substance frequency n (%)</b>	<b>Second most common substance frequency n (%)</b>
<b>2014</b>	Polysubstance 30 (32.6)	Alcohol 18 (19.6)
<b>2015</b>	Polysubstance 25 (31.6)	Alcohol 18 (22.8)
<b>2016</b>	Polysubstance 30 (28.8)	Alcohol 23 (22.1)
<b>2017</b>	Polysubstance 32 (29.4)	Alcohol 31 (28.4)
<b>2018</b>	Polysubstance 54 (43.5)	Alcohol 22 (17.7)

<b>Social Problems</b>	
<b>Social Problem</b>	<b>Frequency n (%)</b>
Other	506 (25.6)
Relationship problem	171 (8.6)
Financial stress	58 (2.9)
Homelessness	56 (2.8)
Unemployed	56 (2.8)
Abuse / neglect	53 (2.7)

Percentage and number of deceased or absconded patients per year		
Year	Number deceased or absconded	Frequency (%)
<b>2014</b>	13	3.6
<b>2015</b>	14	4.0
<b>2016</b>	10	2.4
<b>2017</b>	14	4.0
<b>2018</b>	10	2.0

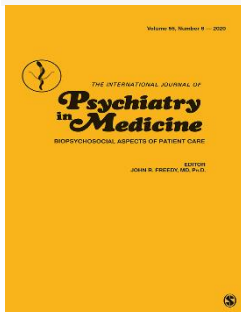
# APPENDIX B – Manuscript Submission Guidelines: The International Journal of Psychiatry in Medicine



0.724

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## Submit Paper

**Please read the guidelines below before visiting the submission site!**

[Submission Site](#)

Manuscript Submission Guidelines:

**Manuscript Submission Guidelines: *The International Journal of Psychiatry in Medicine***

This Journal is a member of the [Committee on Publication Ethics](#).

This Journal recommends that authors follow the [Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals](#) formulated by the International Committee of Medical Journal Editors (ICMJE).

**Please read the guidelines below then visit the Journal's submission site <https://mc.manuscriptcentral.com/ijpm> to upload your manuscript. Please note that manuscripts not conforming to these guidelines may be returned.**

Only manuscripts of sufficient quality that meet the aims and scope of *The International Journal of Psychiatry in Medicine* will be reviewed.

There are no fees payable to submit or publish in this journal.

As part of the submission process you will be required to warrant that you are submitting your original work, that you have the rights in the work, and that you have obtained and can supply all necessary permissions for the reproduction of any copyright works not owned by you, that you are submitting the work for first publication in the Journal and that it is not being considered for publication elsewhere and has not already been published elsewhere. Please see our guidelines on [prior publication](#) and note that ***The International Journal of Psychiatry in Medicine* may accept submissions of papers that have been posted on pre-print servers**; please alert the Editorial Office when submitting (contact details are at

the end of these guidelines) and include the DOI for the preprint in the designated field in the manuscript submission system. Authors should not post an updated version of their paper on the preprint server while it is being peer reviewed for possible publication in the journal. If the article is accepted for publication, the author may re-use their work according to the journal's author archiving policy.

If your paper is accepted, you must include a link on your preprint to the final version of your paper.

## **1. What do we publish?**

1.1 Aims & Scope

1.2 Article types

1.3 Writing your paper

## **2. Editorial policies**

2.1 Peer review policy

2.2 Authorship

2.3 Acknowledgements

2.4 Funding

2.5 Declaration of conflicting interests

2.6 Research ethics and patient consent

2.7 Clinical trials

2.8 Reporting guidelines

2.9 Research Data

## **3. Publishing policies**

3.1 Publication ethics

3.2 Contributor's publishing agreement

3.3 Open access and author archiving

#### **4. Preparing your manuscript**

4.1 Formatting

4.2 Artwork, figures and other graphics

4.3 Supplemental material

4.4 Reference style

4.5 English language editing services

#### **5. Submitting your manuscript**

5.1 ORCID

5.2 Information required for completing your submission

5.3 Permissions

#### **6. On acceptance and publication**

6.1 SAGE Production

6.2 Online First publication

6.3 Access to your published article

6.4 Promoting your article

#### **7. Further information**

1. What do we publish?

##### **1.1 Aims & Scope**

Before submitting your manuscript to *The International Journal of Psychiatry in Medicine*, please ensure you have read the Aims & Scope.

## **1.2 Article types**

### **Original Research**

1. Limit submissions to biopsychosocial aspects of disease and patient care. The goal of *The International Journal of Psychiatry in Medicine* is to address the complex relationships among biological, psychological, social, religious and cultural systems in patient care. The aim of the journal is to provide a forum where researchers and clinicians in psychiatry, medicine, family medicine, and surgery from around the world can educate each other and advance knowledge concerning biological, psychological, and social theory, methods, and treatment as they apply to patient care. Topics of interest include, but are not limited to: psychobiological, psychological, social, religious and cultural modifiers of illness; mental disorders seen in outpatient medical practice; doctor-patient interactions; ethical issues in medicine; biomedical etiologies of mental symptoms; research from successful collaborative, multidisciplinary models such as geriatrics; and, health services research. The journal will publish original research, review articles, innovative educational programs, editorials, and illustrative case reports.

2. Require all co-authors to read final submitted draft carefully and comprehensively. Preliminary review by senior colleagues and science editors is also strongly encouraged.

3. Double space all text. Number all pages starting with the title page.

4. Arrange manuscript in the following order with each item beginning a new page:  
Title Page, Abstract, Text, Acknowledgments, References, Tables / Figures.

5. The title page should have a title which is informative, declarative, and concise.

Authors' first names, middle initials, and last names should be provided followed with the highest academic degree and institutional affiliation for each author. If the paper has been presented at a meeting, give the name of the meeting, the location, and the inclusive dates. Provide a full address for the author who is to receive correspondence about the manuscript and reprint requests.

6. Abstract should be a single paragraph no longer than 250 words, structured with headings: Objective-, Method-, Results-, Conclusions-. Authors of research articles should include: Objective-question(s) addressed by the study; Method-design of the study, setting (location and level of clinical care), patients or participants (basic manner of selection), interventions (if any), main outcome measures; Results-main findings; and Conclusions-principal conclusion emphasizing new and important aspects of study or observations, including direct clinical applications, if appropriate. Authors of review articles should include the following information, under the headings indicated: Objective-the primary purpose of the review article; Method-data sources, study selection (the number of studies selected for review and how they were selected), data extraction (primary rules for abstracting data and how they were applied); Results- methods of data synthesis, key findings; and Conclusions-including potential applications and research needs.

7. After abstract include 3 to 10 index words\* and "(Int'l. J. Psychiatry in Medicine 2012;30:000-000)". \*(from MeSH list of Index Medicus)

8. The text should include four major sections with headings: Introduction, Method, Results, and Discussion.

- Manuscripts should not exceed 3000 words.
- **INTRODUCTION:** The headings should be on a separate line next to the left margin. Where appropriate, additional subheadings and sub-subheadings can be used indented and underlined at the beginning of a paragraph, respectively.
- **METHOD:** Participants. The method section for research studies should provide a comprehensive description of the subjects. This includes the nature of the subject group, (including informed consent), methods of recruitment, and the manner of selection and number who entered and completed the study. Informed Consent and IRB approval. Indicate that the appropriate procedures were followed in accordance with the ethical standards of the responsible committee on human experimentation, and that IRB approval was obtained. In most cases, this should clearly state that after complete description of the study to the subjects, written informed consent was obtained. Procedures, interventions (if any), measurements used (including information about reliability as appropriate), and methods of data analysis (or synthesis for reviews) should be provided. Adequate description of statistical methods should be provided. Analysis Statistical tests that are not well known should be described and referenced. Spell out all abbreviations (other than those for units of measure) the first time they are used. Idiosyncratic abbreviations should not be used. Generic rather than trade names of drugs should be used.
- **RESULTS:** The Results should include all important results. Results usually begin with a description of the sample, and then proceed to study results. Include the test value, appropriate numeric value, and statistical test of significance. For example, "The analysis of variance indicated that those who received the interventions had significantly lower levels of depression than those assigned to the control condition ( $F=4.32$ ,  $df=3, 37$ ,  $p<0.05$ )." Present the results in a logical sequence in the text,

tables and figures. Do not repeat in the text all the data in the tables. Emphasize or summarize only important observations.

- **DISCUSSION:** The Discussion should emphasize new and important aspects of the study and the conclusions that follow from them. Relate the findings to other relevant studies. Do not repeat in detail data or material given in the Introduction or Results. Link the conclusions with the goals of the study but avoid unqualified statements and conclusions not completely supported by the data or review. Include implications and limitations of the study. Include implications for future research.

9. In Acknowledgments, report grant or any other financial support in a separate paragraph and include the full name of the granting agency and grant number. Drug company support of any kind must be acknowledged.

10. References are to be cited in text in numerical order [1], with brackets [2]. The brackets should come before punctuation marks such as commas and periods, not after.

11. References are to be listed in numerical sequence at the end of the article. All authors, Article title. Journal Title (spelled out) Year; Volume Number: Pages inclusive. e.g. Journal Article - 1. Smith J, Jones RK. This is it. World Research Journal 2012;41:1-10, DOI. Book - 2. Jones RK, Smith J. Primary care. In: Well IM, editor. All we know. Amityville, NY: Baywood, 2012:18-50, DOI. Accuracy of each citation is the authors' responsibility. References should conform exactly to the original spelling, accents, punctuation, etc. Authors should be sure that all references listed have been cited in the text. Personal communications, unpublished manuscripts, manuscripts submitted but not yet accepted should not be included in

the reference list. Manuscripts actually in press may be cited with journal or publisher/ location.

12. Figures should be referenced in text and appear in numerical sequence starting with Figure 1 (even if only one figure). Line art must be original drawings in black ink proportionate to our page size, and suitable for photographing. Indicate top and bottom of figure where confusion may exist. Labeling should be 8 point type. Clearly identify all figures. Figures should be drawn on separate pages and their placement noted by inserting:

-Insert Figure 1 here-

13. Tables must be cited in text in numbered sequence starting with Table 1 (even if only one table). Each table must have a descriptive title. Any footnotes to tables are indicated by super lower case letters. When tables include numbers and percent, the absolute number should be given first and the percent in parentheses (%). Tables should be typed on separate pages and their approximate placement indicated within text by inserting:

-Insert Table 1 here-

References in tables and figures are numbered as though the tables and figures were part of the text.

14. Footnotes are placed at the bottom of the page where referenced. They should be numbered with super Arabic numbers without parentheses or brackets. Footnotes should be brief and usually should not exceed three lines.

15. Authors will be notified of the receipt of their paper and a number that has been assigned to it. This number should be included in all further correspondence.

Reviewed manuscripts will not be returned except upon special request made in the original submission letter and if a self-addressed, postage-paid envelope is included.

16. Authors may suggest three potential unbiased reviewers, but their use is not guaranteed.

### **Review Articles**

Review articles are accepted at IJPM and are published at a rate of one per issue.

The Journal does consider unsolicited reviews, but authors should be aware that invited reviews are likely to have a higher priority.

1. Review articles should be no more than 3000 words
2. Abstract—include an abstract of less than 300 words, no headings
3. Article outline for a Review
4. Describe the topic/problem, including definitions, and epidemiology.

Summarize any controversy or tension around the topic, if any.

1. Review the recent literature regarding the topic, which is usually an area of psychiatry/psychology/spiritual/social symptoms or condition in relation to either a primary care problem or a primary care patient population.
2. Review shortcomings of the current literature and areas that need to be addressed in future research.
3. Summary—including recommendations for addressing this area for practicing physicians.

### **1.3 Writing your paper**

The SAGE Author Gateway has some general advice on [how to get published](#), plus links to further resources.

### **1.3.1 Make your article discoverable**

When writing up your paper, think about how you can make it discoverable. The title, keywords and abstract are key to ensuring readers find your article through search engines such as Google. For information and guidance on how best to title your article, write your abstract and select your keywords, have a look at this page on the Gateway: [How to Help Readers Find Your Article Online](#).

## 2. Editorial policies

### **2.1 Peer review policy**

*The International Journal of Psychiatry in Medicine* adheres to a rigorous double-blind reviewing policy in which the identity of both the reviewer and author are always concealed from both parties.

*The International Journal of Psychiatry in Medicine* is committed to delivering high quality, fast peer-review for your paper, and as such has partnered with Publons. Publons is a third party service that seeks to track, verify and give credit for peer review. Reviewers for *The International Journal of Psychiatry in Medicine* can opt in to Publons in order to claim their reviews or have them automatically verified and added to their reviewer profile. Reviewers claiming credit for their review will be associated with the relevant journal, but the article name, reviewer's decision and the content of their review is not published on the site. For more information visit the [Publons](#) website.

The Editor or members of the Editorial Board may occasionally submit their own manuscripts for possible publication in the journal. In these cases, the peer review process will be managed by alternative members of the Board and the submitting Editor/Board member will have no involvement in the decision-making process.

## **2.2 Authorship**

Papers should only be submitted for consideration once consent is given by all contributing authors. Those submitting papers should carefully check that all those whose work contributed to the paper are acknowledged as contributing authors.

The list of authors should include all those who can legitimately claim authorship.

This is all those who:

- (i) Made a substantial contribution to the concept or design of the work; or acquisition, analysis or interpretation of data,
- (ii) Drafted the article or revised it critically for important intellectual content,
- (iii) Approved the version to be published,
- (iv) Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.

Authors should meet the conditions of all of the points above. When a large, multicentre group has conducted the work, the group should identify the individuals who accept direct responsibility for the manuscript. These individuals should fully meet the criteria for authorship.

Acquisition of funding, collection of data, or general supervision of the research group alone does not constitute authorship, although all contributors who do not meet the criteria for authorship should be listed in the Acknowledgments section.

Please refer to the International Committee of Medical Journal Editors (ICMJE) authorship guidelines for more information on authorship.

## **2.3 Acknowledgements**

All contributors who do not meet the criteria for authorship should be listed in an Acknowledgements section. Examples of those who might be acknowledged include a person who provided purely technical help, or a department chair who provided only general support.

### **2.3.1 *Third party submissions***

Where an individual who is not listed as an author submits a manuscript on behalf of the author(s), a statement must be included in the Acknowledgements section of the manuscript and in the accompanying cover letter. The statements must:

- Disclose this type of editorial assistance – including the individual's name, company and level of input
- Identify any entities that paid for this assistance
- Confirm that the listed authors have authorized the submission of their manuscript via third party and approved any statements or declarations, e.g. conflicting interests, funding, etc.

Where appropriate, SAGE reserves the right to deny consideration to manuscripts submitted by a third party rather than by the authors themselves.

### **2.3.2 *Writing assistance***

Individuals who provided writing assistance, e.g. from a specialist communications company, do not qualify as authors and so should be included in the

Acknowledgements section. Authors must disclose any writing assistance – including the individual’s name, company and level of input – and identify the entity that paid for this assistance. It is not necessary to disclose use of language polishing services.

## **2.4 Funding**

*The International Journal of Psychiatry in Medicine* requires all authors to acknowledge their funding in a consistent fashion under a separate heading. Please visit the [Funding Acknowledgements](#) page on the SAGE Journal Author Gateway to confirm the format of the acknowledgment text in the event of funding, or state that: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

## **2.5 Declaration of conflicting interests**

It is the policy of *The International Journal of Psychiatry in Medicine* to require a declaration of conflicting interests from all authors enabling a statement to be carried within the paginated pages of all published articles.

Please ensure that a ‘Declaration of Conflicting Interests’ statement is included at the end of your manuscript, after any acknowledgements and prior to the references. If no conflict exists, please state that ‘The Author(s) declare(s) that there is no conflict of interest’. For guidance on conflict of interest statements, please see the ICMJE recommendations [here](#).

## **2.6 Research ethics and patient consent**

Medical research involving human subjects must be conducted according to the [World Medical Association Declaration of Helsinki](#).

Submitted manuscripts should conform to the [ICMJE Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals](#), and all papers reporting animal and/or human studies must state in the methods section that the relevant Ethics Committee or Institutional Review Board provided (or waived) approval. Please ensure that you have provided the full name and institution of the review committee, in addition to the approval number.

For research articles, authors are also required to state in the methods section whether participants provided informed consent and whether the consent was written or verbal.

Information on informed consent to report individual cases or case series should be included in the manuscript text. A statement is required regarding whether written informed consent for patient information and images to be published was provided by the patient(s) or a legally authorized representative. Please do not submit the patient's actual written informed consent with your article, as this in itself breaches the patient's confidentiality. The Journal requests that you confirm to us, in writing, that you have obtained written informed consent but the written consent itself should be held by the authors/investigators themselves, for example in a patient's hospital record. The confirmatory letter may be uploaded with your submission as a separate file.

Please also refer to the [ICMJE Recommendations for the Protection of Research Participants](#).

All research involving animals submitted for publication must be approved by an ethics committee with oversight of the facility in which the studies were conducted.

The journal has adopted the [Consensus Author Guidelines on Animal Ethics and Welfare for Veterinary Journals](#) published by the International Association of Veterinary Editors.

## 2.7 Clinical trials

*The International Journal of Psychiatry in Medicine* conforms to the [ICMJE requirement](#) that clinical trials are registered in a WHO-approved public trials registry at or before the time of first patient enrolment as a condition of consideration for publication. The trial registry name and URL, and registration number must be included at the end of the abstract.

## 2.8 Reporting guidelines

The relevant [EQUATOR Network](#) reporting guidelines should be followed depending on the type of study. For example, all randomized controlled trials submitted for publication should include a completed [CONSORT](#) flow chart as a cited figure and the completed CONSORT checklist should be uploaded with your submission as a supplementary file. Systematic reviews and meta-analyses should include the completed PRISMA flow chart as a cited figure and the completed [PRISMA](#) checklist should be uploaded with your submission as a supplementary file. The [EQUATOR wizard](#) can help you identify the appropriate guideline.

Other resources can be found at [NLM's Research Reporting Guidelines and Initiatives](#).

## 2.9 Research Data

At SAGE we are committed to facilitating openness, transparency and reproducibility of research. Where relevant, *The International Journal of Psychiatry in Medicine* **expects** authors to share their research data in a suitable public repository subject to ethical considerations and where data is included, to add a data accessibility statement in their manuscript file. Authors should also follow data citation principles. For more information please visit the [SAGE Author Gateway](#), which includes information about SAGE's partnership with the data repository Figshare.

### 3. Publishing Policies

#### 3.1 Publication ethics

SAGE is committed to upholding the integrity of the academic record. We encourage authors to refer to the Committee on Publication Ethics' [International Standards for Authors](#) and view the [Publication Ethics](#) page on the SAGE Author Gateway.

##### 3.1.1 Plagiarism

*The International Journal of Psychiatry in Medicine* and SAGE take issues of copyright infringement, plagiarism or other breaches of best practice in publication very seriously. We seek to protect the rights of our authors and we always investigate claims of plagiarism or misuse of published articles. Equally, we seek to protect the reputation of the journal against malpractice. Submitted articles may be checked with duplication-checking software. Where an article, for example, is found to have plagiarised other work or included third-party copyright material without permission or with insufficient acknowledgement, or where the authorship of the article is contested, we reserve the right to take action including, but not limited to:

publishing an erratum or corrigendum (correction); retracting the article; taking up the matter with the head of department or dean of the author's institution and/or relevant academic bodies or societies; or taking appropriate legal action.

### **3.1.2 Prior publication**

If material has been previously published it is not generally acceptable for publication in a SAGE journal. However, there are certain circumstances where previously published material can be considered for publication. Please refer to the guidance on the [SAGE Author Gateway](#) or if in doubt, contact the Editor at the address given below.

### **3.2 Contributor's publishing agreement**

Before publication, SAGE requires the author as the rights holder to sign a Journal Contributor's Publishing Agreement. SAGE's Journal Contributor's Publishing Agreement is an exclusive licence agreement which means that the author retains copyright in the work but grants SAGE the sole and exclusive right and licence to publish for the full legal term of copyright. Exceptions may exist where an assignment of copyright is required or preferred by a proprietor other than SAGE. In this case copyright in the work will be assigned from the author to the society. For more information please visit the [SAGE Author Gateway](#).

### **3.3 Open access and author archiving**

*The International Journal of Psychiatry in Medicine* offers optional open access publishing via the SAGE Choice programme. For more information please visit the [SAGE Choice website](#). For information on funding body compliance, and

depositing your article in repositories, please visit [SAGE Publishing Policies](#) on our Journal Author Gateway.

#### 4. Preparing your manuscript for submission

##### **4.1 Formatting**

The preferred format for your manuscript is Word. LaTeX files are also accepted.

Word and (La)Tex templates are available on the [Manuscript Submission Guidelines](#) page of our Author Gateway.

##### **4.2 Artwork, figures and other graphics**

For guidance on the preparation of illustrations, pictures and graphs in electronic format, please visit SAGE's [Manuscript Submission Guidelines](#).

Figures supplied in color will appear in color online regardless of whether or not these illustrations are reproduced in color in the printed version. For specifically requested color reproduction in print, you will receive information regarding the costs from SAGE after receipt of your accepted article.

##### **4.3 Supplemental material**

This journal is able to host additional materials online (e.g. datasets, podcasts, videos, images etc.) alongside the full-text of the article. For more information please refer to our [guidelines on submitting supplemental files](#).

##### **4.4 Reference style**

*The International Journal of Psychiatry in Medicine* adheres to the [SAGE Vancouver](#) reference style. View the [SAGE Vancouver guidelines](#) to ensure your manuscript conforms to this reference style.

If you use [EndNote](#) to manage references, you can download the [SAGE Vancouver EndNote output file](#).

#### **4.5 English language editing services**

Authors seeking assistance with English language editing, translation, or figure and manuscript formatting to fit the journal's specifications should consider using SAGE Language Services. Visit [SAGE Language Services](#) on our Journal Author Gateway for further information.

#### 5. Submitting your manuscript

*The International Journal of Psychiatry in Medicine* is hosted on SAGE Track, a web based online submission and peer review system powered by ScholarOne™ Manuscripts. Visit <https://mc.manuscriptcentral.com/ijpm/> to login and submit your article online.

**IMPORTANT:** Please check whether you already have an account in the system before trying to create a new one. If you have reviewed or authored for the journal in the past year it is likely that you will have had an account created. For further guidance on submitting your manuscript online please visit [ScholarOne Online Help](#).

#### **5.1 ORCID**

As part of our commitment to ensuring an ethical, transparent and fair peer review process SAGE is a supporting member of [ORCID, the Open Researcher and Contributor ID](#). ORCID provides a unique and persistent digital identifier that distinguishes researchers from every other researcher, even those who share the same name, and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between researchers and their professional activities, ensuring that their work is recognized.

The collection of ORCID IDs from corresponding authors is now part of the submission process of this journal. If you already have an ORCID ID you will be asked to associate that to your submission during the online submission process. We also strongly encourage all co-authors to link their ORCID ID to their accounts in our online peer review platforms. It takes seconds to do: click the link when prompted, sign into your ORCID account and our systems are automatically updated. Your ORCID ID will become part of your accepted publication's metadata, making your work attributable to you and only you. Your ORCID ID is published with your article so that fellow researchers reading your work can link to your ORCID profile and from there link to your other publications.

If you do not already have an ORCID ID please follow this [link](#) to create one or visit our [ORCID homepage](#) to learn more.

## **5.2 Information required for completing your submission**

You will be asked to provide contact details and academic affiliations for all co-authors via the submission system and identify who is to be the corresponding author. These details must match what appears on your manuscript. The affiliation

listed in the manuscript should be the institution where the research was conducted. If an author has moved to a new institution since completing the research, the new affiliation can be included in a manuscript note at the end of the paper. At this stage please ensure you have included all the required statements and declarations and uploaded any additional supplementary files (including reporting guidelines where relevant).

### **5.3 Permissions**

Please also ensure that you have obtained any necessary permission from copyright holders for reproducing any illustrations, tables, figures or lengthy quotations previously published elsewhere. For further information including guidance on fair dealing for criticism and review, please see the Copyright and Permissions page on the [SAGE Author Gateway](#).

## 6. On acceptance and publication

### **6.1 SAGE Production**

Your SAGE Production Editor will keep you informed as to your article's progress throughout the production process. Proofs will be made available to the corresponding author via our editing portal SAGE Edit or by email, and corrections should be made directly or notified to us promptly. Authors are reminded to check their proofs carefully to confirm that all author information, including names, affiliations, sequence and contact details are correct, and that Funding and Conflict of Interest statements, if any, are accurate. Please note that if there are any changes to the author list at this stage all authors will be required to complete and sign a form authorising the change.

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Online First allows final articles (completed and approved articles awaiting assignment to a future issue) to be published online prior to their inclusion in a journal issue, which significantly reduces the lead time between submission and publication. Visit the [SAGE Journals help page](#) for more details, including how to cite Online First articles.

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## 7. Further information

Any correspondence, queries or additional requests for information on the manuscript submission process should be sent to the *The International Journal of Psychiatry in Medicine* editorial office as follows:

## APPENDIX C – Approval by Human Research Ethics Committee



UNIVERSITY OF CAPE TOWN

Faculty of Health Sciences

Human Research Ethics Committee



Room GSO- Old Main Building

Groote Schuur Hospital

Observatory 7925

Telephone [0211 406 6492

Email: [hrec-enquiries@uct.ac.za](mailto:hrec-enquiries@uct.ac.za)

Website: [www.health.uct.ac.za/fbs/research/humanethics/f9tms](http://www.health.uct.ac.za/fbs/research/humanethics/f9tms)

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06 August 2020

HREC REF: 433/2020

A/Prof J Hoare

Department of Psychiatry & Mental Health

Drs Bungalows, GSH

Email: [jackle.hoare@uct.ac.za](mailto:jackle.hoare@uct.ac.za)

Student: [baileejean@gmail.com](mailto:baileejean@gmail.com)

Dear A/Prof Hoare

PROJECT TITLE: A RETROSPECTIVE ANALYSIS OF REFERRALS TO  
CONSULTATION LIAISON  
PSYCHIATRY OVER A FIVE-YEAR PERIOD IN A TERTIARY HOSPITAL IN  
SOUTH AFRICA

MMED-CANDIDATE- DR BAILEE ROMBURGH

Thank you for submitting your study to the Faculty of Health Sciences Human Research Ethics Committee (HREC) for review.

It is a pleasure to inform you that the HREC has formally approved the above-mentioned study.

This approval is subject to strict adherence to the HREC recommendations regarding research involving human participants during COVID -19, dated 17 March 2020 & 06 July 2020.

Approval is granted for one year until the 30 August 2021.

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.

(Forms can be found on our website:

[www.health.uct.ac.za/fhs/research/humanethics/forms](http://www.health.uct.ac.za/fhs/research/humanethics/forms))

The HREC acknowledge that the student: Dr Bailee Romburgh will also be involved in this study.

Please quote the HREC REF In all your correspondence.

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please note that for all studies approved by the HREC, the principal investigator must obtain appropriate institutional approval, where necessary, before the research may occur.

HREC 433/2020\*

Yours sincerely

**PROFESSOR M BLOCKMAN**  
**CHAIRPERSON, FHS HUMAN RESEARCH ETHICS COMMITTEE**

**PROFESSOR M BLOCKMAN**

Federal Wide Assurance Number: FWA00001637.

Institutional Review Board (IRB) number: IRB00001938

NHREC-registration number: REC-210208-007

This serves to confirm that the University of Cape Town Human Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical Research Council (MRC-SA), Food and Drug Administration (FDA-USA), International Council for

Harmonisation of Technical Requirements for Pharmaceuticals for Human Use: Good Clinical Practice (ICH GCP), South African Good Clinical Practice Guidelines (DOH 2006), based on the Association of the British Pharmaceutical Industry Guidelines (ABPI), and Declaration of Helsinki (2013) guidelines.

The Human Research Ethics Committee granting this approval is in compliance with the ICH

Harmonised Tripartite Guidelines E6: Note for Guidance on Good Clinical Practice (CPMP/.ICH/135/95) and FDA Code Federal Regulation Part 50, 56 and 312,

HREC 433/2020"

## APPENDIX D – Approval by Groote Schuur Hospital



**GROOTE SCHUUR HOSPITAL**

Enquiries: Dr Bernadette Eick

e-mail: [Bernadette.Eick@westerncape.gov.za](mailto:Bernadette.Eick@westerncape.gov.za)

Professor Jackie Hoare  
**Psychiatry & Mental Health**

E-mail: [hoare.jax@gmail.com](mailto:hoare.jax@gmail.com) / [baileejean@gmail.com](mailto:baileejean@gmail.com)

Dear Professor Hoare,

**RESEARCH PROJECT: A Retrospective Analysis Of Referrals To Consultation Liaison Psychiatry Over A Five-year Period In A Tertiary Hospital In South Africa (MMed Dr Bailee Romburgh)**

Your recent letter to the hospital refers.

You are granted permission to proceed with your research, which is valid until **30 August 2021**.

Please note the following:

- a) Your research may not interfere with normal patient care.
- b) Hospital staff may not be asked to assist with the research.
- c) Confidentiality must always be maintained.**
- d) No additional costs to the hospital should be incurred as indicated in your Annexure 2 i.e. Lab, consumables or stationery. If access to TRACK Care/NHLS is required, kindly attach our letter of approval to the application form and approach Information Management to assist with data.**
- e) **No patient folders may be removed from the premises or be inaccessible.**
- f) Please provide the research assistant/field worker with a copy of this letter as verification of approval.
- g) Should you at any time require photographs of your subjects, please obtain the necessary indemnity forms from our Public Relations Office (E45 OMB or ext. 2187/2188).**
- h) Should you require additional research time beyond the stipulated expiry date, please apply for an extension.
- i) Please discuss the study with the HOD before commencing.
- j) Please introduce yourself to the person in charge of an area before commencing.
- k) On completion of your research, please forward any recommendations/findings that can be beneficial to use to take further action that may inform redevelopment of future policy / review guidelines.
- l) Please contact Michelle Riley (Patient Fees) at ext. 2276 to ascertain if there will be charges for conducting the Research and to obtain a quote or to discuss charges
- m) Kindly submit a copy of the publication or report to this office on completion of the research.**
- n) At no time should any posters encouraging patients to partake in research, be displayed within a clinical area.**

I would like to wish you every success with the project.

Yours sincerely

**DR BERNADETTE EICK**  
**CHIEF OPERATIONAL OFFICER**  
Date: 18 November 2020

C.C. Mr. L. Naidoo  
Dr T. Numanoglu  
Professor D. Stein

G46 Management Suite, Old Main Building,

Private Bag X,

Observatory 7925

Observatory, 7935

Tel: +27 21 404 6288 fax: +27 21 404 6125

[www.westerncape.gov.za/health](http://www.westerncape.gov.za/health)

## APPENDIX E – Data Capture Form

**Consultation Liaison Psychiatry data sheet** *(if ticking terms in italics, please specify details)*

Folder number (Or sticker folded  Initials over top of form) .							Age:	M / F	Initials			
Referring department  & Gynae Other	Surgery	Internal Medicine	C14 trauma	Cl3/C15 Casualty	Obs & Gynae	Other						
	Neurology	Other specialties (derm/EN)	Paeds	Ortho								
Dates: (blank if not applicable)	Admission to GSH	Rerral to CL	1st CL assessment	Discharge from CL Psych	Absconded / Deceased	Discharge from GSH						
Reason for referral. May be >1.  Based on words  of referrer.	Substance use problem	Known with mental illness, review	Refusal of hospital treatment	Capacity Assessment	Query diagnosis of Delirium	Suicide/risk assessment. If OD, list substance:						
	Current symptoms of mental illness	Psychosis ab\N beliefs / hallucination	Behavioral problem in ward	Other								
		Depression										
		Other										
<b>Psychiatric Diagnoses</b> <b>(final on discharge)</b>												

Risk assessment	Self	Low	Moderate	High	Details:	
	To others	Low	Moderate	High	Details:	
Current substance use. *If Use disorder	Yes	List substances:				
	No					
Social problems *If it's the primary problem	Homeless	Relationship problem	Abuse / neglect	Unemployed	Financial stress	Other
<b>Medical diagnoses</b>						
Immediate Management. Details on pg. 2 if needed	Medication Initiation / adjustment	Supportive counselling (includes education)	Further medical investigation	Certification under MHCA	Family intervention (education, collateral etc.)	Countertransference issue
	<u>Other:</u>					
Referral	Social worker	Inpatient psychology	Neurology	Dietician	Speech / Audio	Other medical dept Ref:
OUTCOME – ADMIT	Admit G22 GSH	Admit C23/22 GSH	Admit to Psych elsewhere:			
OUTCOME-GSH Psych OPD	GSH J2 CL psych OPD	GSH neuropsych	GSH OPD psychology	GSH other psych:		

OUTCOME: other psych	Community psych clinic	DCAP outpatients	Other Psychiatry f/u e.g. LGH		
OUTCOME: no psych	Discharged from Psych	Deceased	Absconded	Patient not found	Other: