

ACADEMIC: ORIGINAL RESEARCH

Understanding the scope of consultation-liaison psychiatry referrals in a general hospital setting in New Zealand

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Abstract

Background

The objective of this study was to characterise referrals to the consultation-liaison psychiatry (CLP) service at the largest district health board (DHB) in New Zealand.

Materials and Methods

This retrospective observational study analysed referrals (n=1046) received by the CLP service at Waitematā DHB in Auckland for those ≥18 years old over a period of six months (November 2017 to April 2018). Features of the referrals, assessments, and interventions from the emergency department (ED) and inpatient wards were analysed.

Results

The main reasons for referral from the ED were self-harm/suicidal ideation and to a lesser extent, staff support. The main reasons for referral from the inpatient wards were mood disorder, medication management, and suicidal ideation. The main interventions by the CLP service were clarifying diagnoses, developing management plans based on risk assessments, medication advice, and seeking collateral information from other sources. Upon discharge from the CLP service, most referrals were passed on for mental health follow-up by other community mental health services.

Conclusions

The study demonstrates the diverse nature of referrals with the most common referral reason being mood disorder from inpatient wards versus self-harm from the ED. In line with this, the interventions most often offered by the CLP service in either setting were diagnostic clarification and risk assessment and management. This is the first detailed study of CLP referrals in a New Zealand setting. The results of this study provide insight into how CLP services function and recognise the complexity of services offered, and are relevant to services in Australasia and beyond.

Introduction

Consultation-liaison psychiatry (CLP) is a sub-specialty that can be traced back to more than 200 years ago.¹ CLP works at the interface between mental and physical health in a general hospital setting. The two broad components are firstly, sensitising non-psychiatric medical staff to psychosocial and psychiatric problems of patients, and secondly, providing a focused, comprehensive review and care of patients.¹

Through the close liaison relationship between medical and psychiatric services, prevention, together with early detection and management, aids in reducing both psychiatric and physical morbidity in the patient.

Growth in CLP services has largely been driven by an increased recognition of need in the clinical setting. CLP services have also been shown to improve the management of psychiatric needs in medical settings, thereby reducing overall health costs.² Additionally, CLP is beneficial in improving relationships between CLP and general hospital staff, as well as enhancing and improving the services provided through ongoing education for medical and surgical hospital teams.³

Over the last two decades, there has been growing interest in evaluating CLP services worldwide, with studies conducted in countries such as the United Kingdom, the United States of America, Australia, and parts of Europe and Asia.⁴⁻¹⁰ Some of these countries have undertaken regular assessments of CLP services regionally or nationally and have therefore been able to track the progress of CLP service development. The first national survey of CLP services in NZ (CLPSNZ-1) was conducted in 2018 using a standardised tool and captured responses from consultation-liaison psychiatrists at 12 CLP services nationally. The study found significant heterogeneity amongst CLP services in terms of structure and function, and in particular, the coverage of emergency departments (EDs) and younger/older patient populations.¹¹⁻¹²

Despite multiple international studies focusing on the structural configuration of CLP services, the work CLP services undertake is still poorly understood due to wide variation in the size of service, geographical location, and range of activities conducted.⁴ Guthrie et al.⁴ developed a concise approach to capture CLP services in terms of input, which includes referrals to the service, as well as output, such as treatment modalities and discharge location, thereby allowing a typology that focused on characterizing CLP interventions. The current study aims to use a modified version of this typology to characterise the scope of CLP in a New Zealand setting.

Materials and Methods

STUDY DESIGN

This is a retrospective observational study reviewing patient records over a period of six months (November 2017 to April 2018). The study received locality approval from Waitematā DHB and is registered with the Waitematā DHB Research and Knowledge Centre.

STUDY SETTING

The study focuses specifically on the CLP service at Waitematā District Health Board (WDHB), the largest health district in New Zealand.

land. WDHB consists of the North Shore and Waitakere Hospital campuses, serving a population of approximately 600,000 people. The bed capacity at North Shore Hospital is 700 compared to 283 at Waitakere, leading to a combined bed capacity of 983 in the WDHB region. The CLP service operates 24 hours a day, seven days a week, and can review patients with mental health needs, receiving referrals from all the wards and EDs at both campuses. Furthermore, the service receives referrals for outpatient assessments from various specialities. For this study, only ED and inpatient ward referrals were assessed.

The CLP service at WDHB is multidisciplinary, consisting of consultant psychiatrists, registrars, nurses, and a clinical psychologist. Once a referral is received, it is triaged by a CLP coordinator nurse and if appropriate, it is accepted, registered, and prioritised based on acuity.

The ED is the main point of entry for all patients with mental health needs presenting to the hospital, unless there has been prior agreement with other wards within the hospital for direct admissions. This primarily applies to mental health patients with coexisting physical health needs. All patients at the ED are initially triaged according to the Australasian triage scale¹³ by the ED triage nurse, who then decides if the person needs to be seen by a mental health service at the hospital. If the person's mental health presentation is associated with a physical health condition or self-harm, the referral will be further triaged by the CLP coordinator nurse and assigned to a CLP clinician for assessment. If the presentation to the ED is solely for mental health reasons or addiction issues, without ongoing medical needs or concerns about self-harm, the patient will be referred to the appropriate community mental health team (CMHT) either by the ED triage nurse or CLP coordinator nurse.

DATA SOURCES, COLLECTION, AND ANALYSIS

The electronic patient records for each patient were assessed on two separate electronic patient record systems covering the entire Auckland region - the mental health notes in the electronic patient records system and the physical health record system. Referrals were identified and grouped according to referral source: either the ED or inpatient wards. Figure 1 shows variables identified to classify the data. Although referrals could include more than one reason, only the primary reason included in each referral has been described in this study.

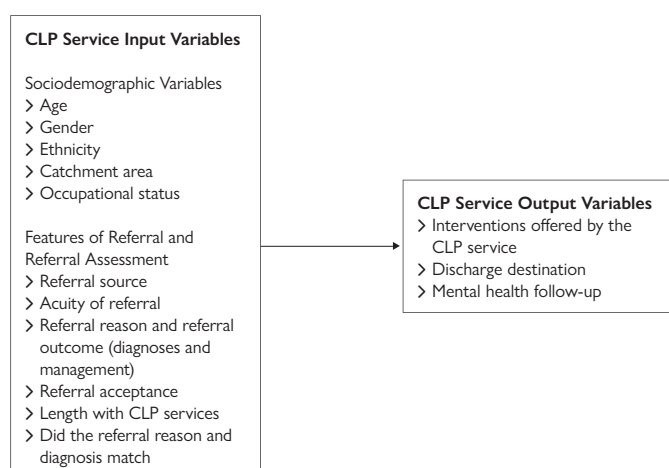


Figure 1: CLP service input and output variables.

CLASSIFICATION OF MAIN CLP SERVICE INTERVENTIONS

Interventions offered by the CLP service were iteratively created following a review of the literature⁴ and assessment of referrals by the researchers of this paper. To more accurately capture the data in the present study, the criteria used by Guthrie et al.⁴ were modified with the addition of intervention three, constant observer and checks, and intervention nine, gathering collateral information from other sources.

The final ten interventions were:

1. Diagnostic clarification: Involved assessment of the individual and working with the medical or surgical team to establish a diagnosis (if there is one).
2. Medication advice: The review of the patient, electronic clinical notes, or discussion with the referring team, followed by adjustments to, discontinuation of, or switching their psychotropic medication due to their physical health condition or new diagnoses.
3. Constant observer and checks: Enlisting 1:1 watch or 15-minute checks when the individual is at risk of absconding or harming themselves or others.
4. Brief psychological intervention: Providing brief psychological intervention/psychoeducation with the individual during the consult. For example, grounding exercises or sensory modulation for anxiety management.
5. Referral for involvement of other disciplines within the hospital: Input of other allied health workers, such as dieticians or social workers, consulted by the CLP team.
6. Risk assessment and management: Assessing the level of risk in an individual on various domains, such as the risk to themselves/others, absconding, and neglect/vulnerability.
7. Decision-making capacity assessment: Evaluation of capacity to consent or refuse therapeutic procedures.
8. Use of the Mental Health Act: Assessment or treatment under the Mental Health (Compulsory Assessment and Treatment) Act 1992.
9. Collateral information from other sources outside the hospital: To obtain a fuller picture, the team would consult with a patient's family, friends, general practitioner (GP) or private clinicians involved in their care, such as psychiatrists or psychologists.
10. Behaviour management: In the context of disturbed behaviour, the CLP service would develop a management plan to maintain safety for patients and staff.

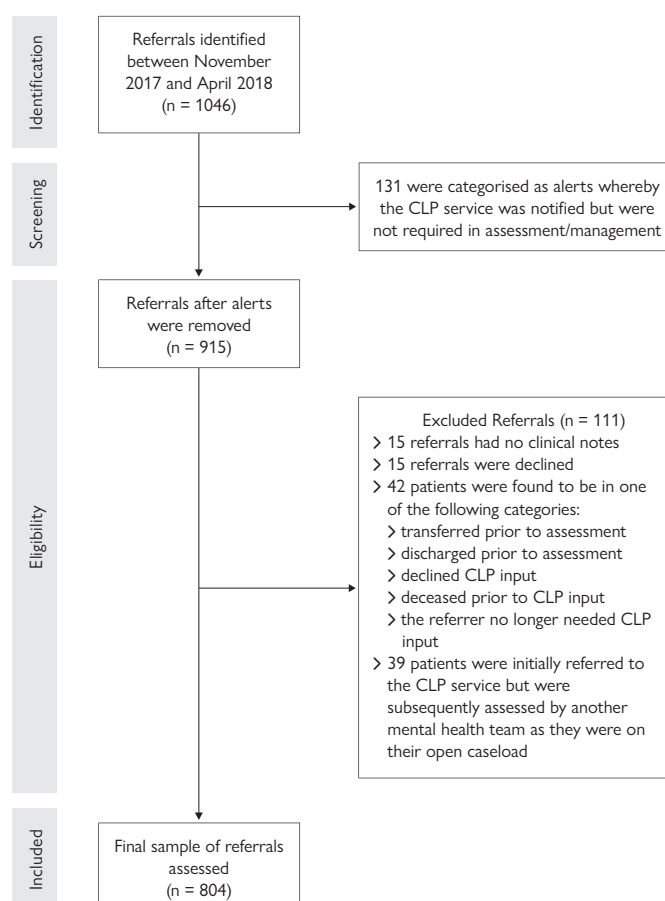


Figure 2: Exclusion criteria for Inpatient and ED referrals.

EXCLUSION CRITERIA

There were 1,046 referrals assessed between November 2017 to April 2018. Of these, 603 were from ED and 443 from inpatient wards. Figure 2 summarises the 804 referrals that were evaluated following exclusion.

Some referrals were classified as psychiatry liaison (PL) alerts. These occurred when the CLP service was notified about a referral that may require intervention or support from the CLP service in future. There were 131 referrals that did not require any consultation or intervention from the CLP service, so were excluded from the final analysis. If a referral was initially classified as a PL alert but then later required CLP intervention, it was reclassified to the appropriate category.

Results

Table 1 summarises the main demographic characteristics of the 804 referrals that were evaluated following exclusion.

Table 1: Demographic characteristics of referrals by Inpatient Ward and ED.

	Inpatient N = 391	Emergency Department N = 413
Age n (%)		
18-64 years	247 (63.2)	368 (89.1)
≥65 years	144 (36.8)	45 (10.9)
Age		
Mean in years ± SD	78.8 ± 8.4	45.5 ± 13.2
Gender n (%)		
Male	181 (46.3)	162 (39.2)
Female	210 (53.7)	251 (60.8)
Ethnicity n (%)		
NZ European	320 (81.8)	331 (80.1)
Māori	53 (13.6)	65 (15.7)
Pacific Peoples	12 (3.1)	11 (2.7)
South/Southeast Asian ^a	4 (1.0)	6 (1.5)
Other ^b	2 (0.5)	0 (0.0)
Catchment area n (%)		
WDHB	357 (91.3)	357 (86.4)
Within the Auckland region	21 (5.4)	31 (7.5)
Beyond the Auckland region	10 (2.6)	19 (4.6)
Other	3 (0.7)	6 (1.5)
Occupational status n (%)		
Unemployed	118 (30.2)	156 (37.8)
Unknown	54 (13.8)	71 (17.2)
Full-time employment	47 (12.0)	81 (19.6)
Retired	121 (30.9)	37 (9.0)
Homemaker	21 (5.4)	31 (7.5)
Part-time employment	23 (5.9)	18 (4.4)
Student	7 (1.8)	19 (4.6)

^a Includes Indian, Sri Lankan, and Chinese

^b Includes Middle Eastern and Latin American

83% of ED referrals were classified as urgent and median time with CLP services was two days. 57% of inpatient referrals were categorised as urgent and the median time with CLP services was five days. Referral reason and outcome of the CLP service are summarised in Table 2. Referral reason and outcome matched in 96% of ED referrals and in 84% of inpatient referrals.

CLP SERVICE OUTPUT VARIABLES

The distribution of interventions is summarised in Figure 3. Each referral often had more than one intervention. In both ED and inpatient settings, diagnostic clarification, risk assessment, medication advice, and seeking collateral information from other sources were the most common interventions.

Table 2: Referral reason and referral outcome to CLP service by Inpatient Ward and ED

	Inpatient ward N = 391		Emergency department N = 413	
	Referral reason	Referral outcome (diagnosis and management)	Referral reason	Referral outcome (diagnosis and management)
Mood disorder	77	75	16	74
Medication management	44	35	6	7
Suicidal ideation	44	15	49	21
Staff support	42	32	24	17
Self-harm	35	18	273	168
Anxiety disorder	32	21	6	9
Hallucinations/psychosis/ paranoia/schizophrenia	26	19	12	27
Confusion/delirium/ dementia /cognitive impairment	22	42	6	8
Behaviour management	17	3	8	4
Somatoform disorder	13	8	2	0
Decision-making capacity assessment	11	8	0	0
Eating disorder	7	8	1	1
Complex case discussion	6	4	1	0
Other ^a	5	8	1	6
Substance dependence	4	16	5	21
Adjustment disorder	3	31	0	28
Neuropsychiatry	2	1	2	0
Post traumatic stress disorder	1	1	0	3
Personality disorder	0	2	1	5
No acute mental health concerns following assessment	0	44	0	14

^a Other includes referral reasons/outcomes not able to be grouped with the remaining categories, for example, referral outcome of serotonin syndrome.

In both the ED and inpatient settings, patients were most frequently discharged to the community, 60% and 52%, respectively. 32% of inpatient ward referrals were discharged back to the referral source, for example, if a patient was referred from the medical ward, they were then discharged back to the medical ward for ongoing medical care. 23% of ED referrals were discharged to the inpatient mental health unit. 85% of ED referrals and 62% of inpatient referrals had mental health follow-up after discharge from the CLP service.

Discussion

This is the first detailed evaluation of referrals to CLP services in a New Zealand context and is one of the largest studies when compared to other work internationally.¹⁴ The main aim of this study was to characterise the scope of referrals to the CLP service in the Waitemata region, the largest health district in New Zealand. We undertook a focused assessment of the CLP service in both ED and inpatient settings. As previous publications have purely focused on features of referrals or assessments undertaken in a single setting, we aimed to broaden the scope and also included CLP service interventions and referral outcomes in this study. This provides a more comprehensive assessment of the patient flow through CLP services and is consistent with recent research undertaken in the UK.¹⁵

REASONS FOR REFERRAL

Our service inputs were consistent with other studies, with mood disorders and suicidality being two of the most common reasons of referral.^{5, 16-17} ED referrals were predominantly for risk assessment of self-harm and mirrors findings elsewhere in the literature.^{3, 15-16, 20} Our

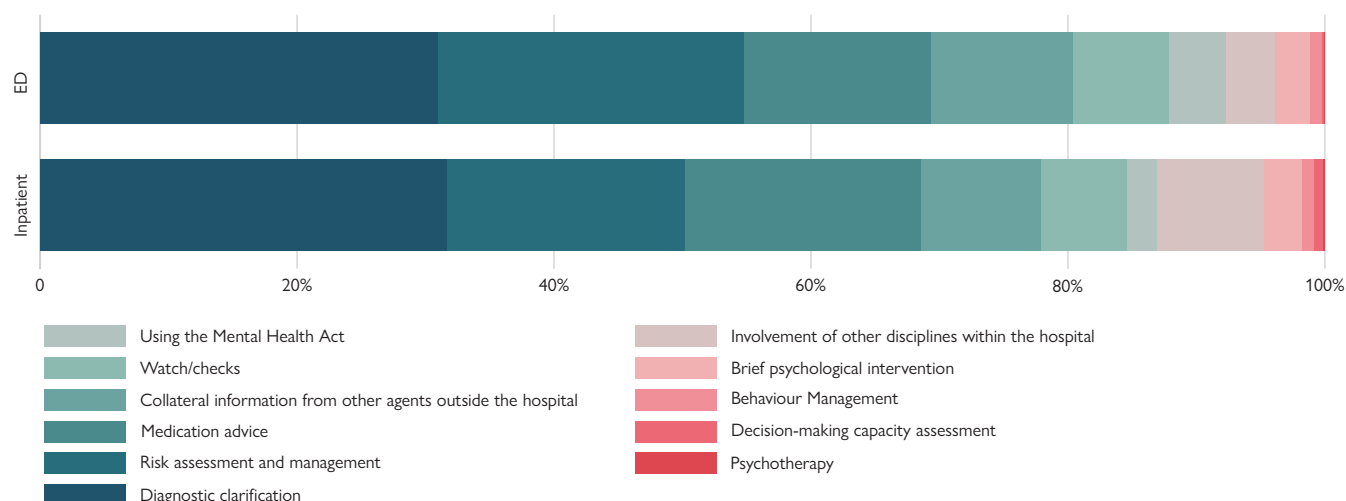


Figure 3: Interventions offered by the CLP service of Inpatient and ED referrals.

results were similar to an Australian study, which reported a high proportion of ED referrals being for patients who were already under the care of community mental health teams (CMHTs).¹⁶ For example, patients with previous mental health diagnoses would present with self-harm in response to stressors, such as a change in environment or social circumstances. Cognitive impairment was recognised as one of the main reasons for referral, which is unsurprising given the ageing populations globally and the significant number of elderly patients in general medical hospitals.^{5, 18-19}

ALCOHOL AND SUBSTANCE DEPENDENCE

Given the high proportion of self-harm referrals from the ED, risk assessment and management of patients presenting with self-harm or harm to others was a key part of how the CLP service intervened and managed a referral. In line with previous studies, key outputs included referring to other services such as CMHTs, as well as arranging alcohol and drug services follow-up after discharge.¹⁵ Compared to work in other countries, substance dependence was not a major reason for referral to CLP in the inpatient setting.^{3, 15, 19} Problems with substance withdrawal were often managed by medical or surgical teams in the first instance, as the Waitematā DHB hospitals in the present study have clear local guidelines around the acute management of withdrawal. The CLP service was consulted only when presentations were complex or when additional medication advice or behaviour management was required in the inpatient setting. In the ED setting, alcohol and drug referrals were not seen by the CLP service but were primarily assessed and managed by the CMHTs, unless substance dependence presentations were complex and required input from the CLP service. These differences in service configuration in Waitematā would need to be taken into consideration when comparing with services elsewhere, as substance dependence presentations can often be one of the most common diagnoses for other CLP services.²¹

RECLASSIFICATION OF 'DIAGNOSIS'

This study found that some patients did not have a diagnosis of a mental health disorder after assessment by the CLP service. This was most often in the case of acute referrals for self-harm or suicidal ideation. This is partly a reflection of the nature of these referrals, as although there was acute distress and risk at the time of the crisis or referral, the crisis may have passed by the time they were seen by the CLP service. There may have also been a component relating to referrer training, referrer comfort in conversations around distress, risk assessment, or subsequent risk of harm handover to CLP services. Several risk assessment referrals were diagnosed with a mood disorder, anxiety disorder, suicidal ideation, or frequently, adjustment disorder. Several referrals that were labelled with mental health diagnoses (e.g., depression, anxiety or suicidality) by the referring service were patients adjusting to bad news or environmental stressors.

A greater proportion of ED referrals were discharged to the inpatient mental health unit compared to referrals from the inpatient wards. This reflects the greater level of care and follow-up required for ED referrals due to their higher acuity, whereas many inpatient ward referrals could be managed by ward physicians with close support from CLP services. Additionally, a higher proportion of ED referrals required community mental health follow-up on discharge when compared to inpatient referrals.

Compared to other studies, there was a relatively high rate of concordance between referral reason and diagnosis in both ED and inpatient settings. However, psychiatric symptoms may be less frequently recognised and treated in surgical departments compared to medical departments.²³ There is a limited number of papers in this area, so the exact difference in referral rates between the two departments is unknown. The current study reported a higher rate of referrals from medical departments (68.4%) than surgical (16.4%), which may have skewed our relatively high concordance rates. Future analyses should aim to evaluate the reasons behind this discrepancy.

STRENGTHS AND LIMITATIONS

This study is the first to research the patterns of CLP services in a New Zealand context, utilising one of the largest DHBs in the country. It includes a relatively large patient cohort and investigates two main settings: the ED and inpatient wards. The output classification system used in this study was modified⁴ and can be used in future studies to allow easier comparison with other CLP services.

This study was limited by its non-random sampling of 1046 cases during a six-month time frame and as a retrospective study, relied on the interpretation of past referrals. Therefore, variability in the length, quality and detail of incoming referrals, combined with the heterogeneous nature of the referral data, limits generalisability and comparability to other studies.

NZ Europeans are overrepresented in the study sample compared to Asian ethnicities. We suspect this is because ethnic minorities are known to present and access mental health services less often than NZ Europeans, due to challenges with mental health literacy, stigma, and services not being set up in a culturally sensitive manner.²²

Though this study was a large single-site study, there are limits to the generalisability of our results with other CLP services. Overseas, CLP services differ in configuration, including the specialties available within the hospital, the extent of ED coverage, the focus on adolescent, adult and elderly populations, as well as alcohol and drug services. Every CLP service operates slightly differently within the larger realm of the management of each hospital and the availability of other mental health teams, including within CLP services in New Zealand. Given this, it is difficult to make comparisons with other CLP services or use the results from this study to draw conclusions for other populations.

Assessment of outpatient CLP services was not undertaken in the study. Future studies may wish to also consider including community referrals to broaden the assessment of patient flow through CLP services in New Zealand, allowing further comparisons to CLP services globally.

Conclusion

Evaluation of CLP services provides opportunities for improvement by establishing a baseline of activities and enables comparisons, either by tracking the same service over time or comparing it with other services. The current study has used an existing methodology and demonstrated how it can be applied, and thus be replicated in the future.⁴ The present study illustrates the diversity of CLP service referrals with self-harm being the leading reason for referral from the ED, compared to mood disorders from inpatient wards. Additionally, we demonstrate the variety of interventions offered in inpatient and ED settings, with the need for diagnostic clarification being the most important factor in each. This study provided not only the first glance into the functioning of CLP services in New Zealand, but also a comprehensive assessment of patient flow.

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Declarations/funding

This study was supported by a University of Auckland summer research studentship. The authors have no conflicts of interest to declare.

Ethical approval/patient consent

This study was conducted following consultation with the Health and Disability Ethics Committee in New Zealand, with confirmation that ethics approval was not required as this work was regarded as part of healthcare service quality improvement. Details of referrals were de-identified with adherence to privacy and confidentiality guidelines.

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