The outcome of Mental Health Care Users admitted under Section 40 of the South African Mental Health Care Act (No 17 of 2002)

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Abstract
Objective: To determine the outcomes of mental health care users (MHCU's) admitted in terms of Section 40 of the South African Mental Health Care Act (No 17 of 2002) (MHCA) and the factors, if any, that are associated with these outcomes. **Method:** The study was a retrospective record review of MHCU's, 18 years and older, referred by the South African Police Service (SAPS) to Chris Hani Baragwanath Hospital (CHBH). All mental health care users handed over to CHBH by SAPS with completed MHCA form 22's during the period July 2007 to December 2007 were included in the study. The outcomes, demographics and clinical characteristics of these referrals were obtained from hospital records. **Results:** During the six-month study period, 718 MHCU's were referred by members of SAPS to the CHBH Emergency Department. Associations were found between discharged MHCU's and i) being male, ii) being less than 35 years of age, iii) being unemployed, iv) having a lower level of education, v) having a past history of substance abuse and/or vi) a past psychiatric illness. Females were twice as likely to be unemployed and admitted to hospital (either to a psychiatric or general medical ward). MHCU's diagnosed with delirium were more likely to be admitted into a medical ward as compared to a psychiatric ward. **Conclusion:** As has been the case in most countries where police services have been incorporated into mental health acts, South Africa's new Mental Health Care Act (No 17 of 2002) has resulted in a large number of referrals by the police to mental health services. However, many of these referrals may not be necessary as most MHCU's end up not being admitted. The characteristics of police referrals suggest that the receiving facility should have the capacity to identify factors that favour outpatient care (especially substance abuse problems) and divert MHCU's presenting with such factors to appropriate treatment facilities without admitting them to the hospital.

Keywords: Mental Health Care Act; Outcome; Police services; Mental illness, South Africa

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Introduction

In most countries where the utilisation of police services have been incorporated into local mental health acts, there has been a steady increase in the number of referrals by the police to the respective mental health services.[1,2] However the appropriateness and outcomes of such referrals have not been extensively studied, except in the United States of America.

Janofsky, et al.[3] report that referrals brought in on police-initiated petitions were significantly more likely to be discharged from the emergency room as compared to those brought in on a health care-initiated or court-initiated referral. The authors go on to clarify that in the police referrals where there was clear evidence of a mental disorder, imminent dangerousness, history of a major mental illness, previous hospitalization, and/or non-compliance to treatment, admission to the hospital was more likely. Watson, et al.[4] also report that police referrals were usually more psychiatrically disturbed, dangerous to others, gravely disabled, more likely to have a criminal record and thus more likely to be appropriately hospitalized.

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Police officers are often faced with a complex decision, i.e. whether to take a suspected mentally ill person to the police cells or to the hospital for psychiatric evaluation. The decision should rest on whether the individual meets the criteria for involuntary admission or is deemed a danger to self or others. This is often unclear to the police officer and poses a dilemma. It may therefore be more appropriate, in a South African setting, where training of police officers in the identification of mental disorders is limited, to take all suspected mentally ill patients to hospital for assessment. However, for the person to be admitted to hospital, signs and symptoms necessitating a hospital admission need to be evident at the time of psychiatric evaluation. The assessment often only occurs after several hours of waiting for the psychiatric examination, and the MHCU may often appear symptom free as they may have calmed sufficiently. They may then be considered inappropriate for admission and discharged from the emergency department. This is the approach adopted by Hawaiian police officers who reserve the apprehension and referral to hospital of suspected mentally ill patients only for those who are too violent and disruptive to be treated in the community and who, despite the delays, will be appropriately hospitalized.[5] Whilst this approach ensures that society is protected, the problem of early intervention for mental illness is not addressed. Lamb, et al.[6] studied outreach teams consisting of mental health professionals and police officers, that are responsible for assessing and appropriately managing suspected psychiatric emergencies within the community. They concluded that this team approach often led to a reduction in the number of persons inappropriately admitted to hospitals and /or incarcerated within the criminal justice system.

Published studies examining the characteristics and factors associated with admission of MHCU's referred to mental health services by the police service are limited and the findings have not been consistent. Steadman, et al.[7] reported that police referrals in New York City were more likely to have 'mild mental disorders' compared to 'psychotic disorders' and less likely to be admitted to a psychiatric inpatient unit. Way, et al.[8] report that police referrals for 'dangerous disorders' required eventual admission to an inpatient psychiatric unit. Janofsky, et al.[3] report that the most commonly diagnosed mental illness amongst police referrals was substance related disorders, major psychiatric illnesses (bipolar disorder, schizophrenia), and non psychotic disorders (personality disorders, adjustment disorders, substance induced mood disorders, and depressive disorder not otherwise specified). Similarly, Redondo, et al.[9] report that mood disorder, psychotic disorder and substance use disorder were common diagnoses. In an Australian prospective study, Meadows, et al.[10] concluded that the most common reason for police referral was threat of self harm and that mental illness was only present in half the referrals (schizophrenia accounting for 18% of referrals).

Redondo, et al.[9] report that police referrals were significantly more likely to be male, exhibit violent behaviour and have a life time history of violence. Although these MHCU's were rated as having more psychosocial stressors, they were significantly less likely to be admitted to inpatient psychiatric units. Similarly, Kneebone, et al.[11] reported that most police referrals in their study were young, single, unemployed men and with little post secondary education. Women were more likely to be divorced and on average eight years older than their male counterparts. 40% of their sample had a criminal history, 64% had a history of assault and 33% had a history of attempted suicide.

The South African Mental Health Care Act (No 17 of 2002)[12,13] was promulgated in 2004. Section 40 of this act clearly defines the role of the South African Police Service (SAPS) with regard to the apprehension and referral of suspected mentally ill MHCU's to health establishments within the country. It states that if a member of the SAPS has reason to believe, either from personal observation or information obtained from a mental health care practitioner (MHCP), that a person is mentally ill and is likely to inflict harm on himself/ herself or others, that member must apprehend that person and cause that person to be: taken to an appropriate health establishment for assessment of the mental health status of that person and handed over into the custody of the head of health establishment (HHE) or any designated person to receive such a person.

As the Act is still in its infancy, the necessity of such referrals and the outcomes thereof, are still to be determined. The aim of this study was to describe the characteristics of all MHCU's referred by members of SAPS to Chris Hani Baragwanath Hospital (CHBH), to determine the outcome of such referrals and the factors, if any, that are associated with these outcomes.

Methods

CHBH is a 2888 bed tertiary academic hospital serving a community of approximately 3 million people, mainly from Soweto. In accordance with the Mental Health Care Act (No 17 of 2002), members of SAPS apprehend and hand over MHCU's suspected of having mental illness to the medical officer at the Emergency Department, after having completed MHCA Form 22 (Appendix 1). The medical officer then briefly examines the MHCU and completes the relevant section on the (MCHA) Form 22 (the medical officer is delegated by the HHE to complete this section of the form). All MHCU's seen by the medical officers in the emergency department are then referred to the medical admissions ward (MAW). The MHCU's are fully assessed by a registrar training in Psychiatry in the MAW, and a decision is then taken to either admit the patient to a psychiatric ward, discharge the patient from the MAW or refer the patient to the department of medicine for further medical care. Essentially this serves as a triage point as a large number of MHCU's are referred to the MAW. An admission is recorded only if the patient is admitted to either a medical or psychiatric ward. Copies of all the psychiatric notes are placed in the MHCU's file. This file and copies of the MHCA Form 22 are stored in the Psychiatry Department's filing room.

This study was a retrospective record review of all MHCU's referred by SAPS to CHBH in the period July to December 2007. MHCU's were included if a MHCA Form 22 was located in the MHCU's psychiatric file; they were ≥ 18 years of age; and were referred during the study period July to December 2007. The following information was obtained from the MHCU's file: age, sex, highest level of education (HLOE), employment status, marital status, history of substance abuse, forensic history, past history of psychiatric illness, family history of psychiatric illness, and presenting diagnosis. The final outcome was also obtained from the MHCU's psychiatric records, namely: discharged (from the MAW) or admitted (to a psychiatric ward or to a medical ward).

Each record was assigned a unique identifying case number for filing purposes. Some participants had more than one visit during the study period and each visit was considered a separate case.

Ethics

The study was submitted to the University of the Witwatersrand's Human Research Ethics Committee (HREC) and approval was obtained. All MHCU's details remained anonymous and confidential information was not recorded on the data sheet.

Results

During the six-month study period 718 MHCU's were referred by members of SAPS to CHBH Emergency Department. The forms and psychiatric hospital notes of only 708 referrals could be traced.

Demographic and clinical characteristics

Of the 708 referrals, 81.8% (n=579) were males. Approximately 21.9% (n=155) were between 18 and 25 yrs; 34.5% (n=244) were between 26 and 35 yrs; 30.9% (n=219) were between 36 and 50 yrs and 10.45% (n=74) were between 51 and 60 yrs. The ages of 16 MHCU's were unknown.

The majority (55.7%) had less than 10 years of formal school education. 92.5% were unemployed and 84.3% were never married. 53.4% (n=378) of the MHCU's had a history of substance abuse and 78% (n=552) a past psychiatric illness. Only 2.7% (n=19) had a family history of psychiatric illness and 6.6% (n=47) a positive forensic history. 28.7% (n=203) of the MHCU's were diagnosed with schizophrenia; 24.2% (n=171) with bipolar 1 disorder (BMD); 29.8% (n=211) with a substance induced mood/psychotic disorder (SIMPD); 6.9% (n=49) with psychotic/mood disorder due to general medical condition (MP^2GMC) and 2.1% (n=15) with delirium. One user was diagnosed as having a personality disorder (PD). The diagnosis was unknown in 8.19% (n=58) of MHCU's.

Table I: Frequency distribution of outcomes of the study population

OUTCOME	*Study Population (n=708)*	
	Number	*Percentage*
Discharged from MAW	319	45.1
Admitted to Psychiatric Ward	272	38.4
Admitted to Medical Ward	102	14.4
Unknown	15	2.1

Final outcomes

Forty-five, point one percent (n=319) of police referrals to CHBH were discharged (from the MAW). Of those admitted from the MAW, 38.42% (n=272) were to a psychiatric ward and 14.41% (n=102) to a medical ward (Table I). It was not possible to trace the outcome of 15 MHCU's from the information in the hospital records. Statistics were therefore computed excluding the unknown variable results.

Associations between demographic, clinical characteristics and final outcomes

Approximately 46% of the MHCU's admitted (medical and psychiatric wards) were above the age of 35 yrs (Table II). Further, 12.3% (n=46) of these admissions were in the age group 51-60 years. By contrast, 62.1% of all the MHCU's discharged, (from the MAW) were below the age of 35 yrs

Table II. Frequency distribution and comparison of demographic characteristics in 3relation to outcomes.

Characteristics	*MHCU discharged from MAW n=319 (%)*	*MHCU admitted to psych ward n=272 (%)*	*MHCU admitted to medical ward n=102 (%)*	
Age Group (yrs)				
18-25	87(27.27)	54(19.85)	9(8.82)	X^2=25.9, p=0.011
26-35	111(34.80)	90(33.09)	39(38.24)	
36-50	90(28.21)	89(32.72)	38(37.25)	
51-60	25(7.84)	34(12.50)	12(11.76)	
Unknown	6(1.88)	5(1.84)	4(3.92)	
Gender				
Male	280(87.77)	209(76.84)	77(75.49)	X^2=5.09, p=0.002
Female	39(12.23)	63(23.16)	25(24.51)	
Substance abuse history				
Positive	197(61.76)	146(53.68)	27(26.47)	X^2=40.95, p=0.000
Negative	48(15.05)	49(18.01)	26(25.49)	
Unknown	74(23.20)	77(28.31)	49(48.04)	
Forensic history				
Positive	21(6.58)	18(6.62)	4(3.92)	X^2=15.74, p=0.015
Negative	31(9.72)	17(6.25)	5(4.90)	
Unknown	267(83.70)	237(87.13)	93(91.18)	
Past psychiatric history				
Positive	258(80.88)	227(83.46)	57(55.88)	X^2=41.61, p=0.000
Negative	48(15.05)	39(14.34)	31(30.39)	
Unknown	13(4.08)	6(2.21)	14(13.73)	

(χ^2=25.90, p=0.011). Although there were significantly more males (81.8%) initially referred by the police as compared to females, significantly more males [88% (n=280)] were discharged (from the MAW) as compared to females [12.23% (n=39)], (χ^2=5.09, p=0.002).

Sixty-one, point eight percent (n=197) of MHCU's discharged (from the MAW) had a positive substance abuse history. Of the MHCU's admitted with a positive history of substance abuse, 53.7% (n=146) were admitted to the psychiatric wards and 26.5% (n=27) to the medical wards (χ^2=40.95, p=0.000) (Table II).

Of the total of 47 MHCU's referred by SAPS with a positive forensic history, twenty one were discharged (from the MAW). Patients with a positive forensic history accounted for only 6.62% (n=18) of those admitted to the psychiatric wards compared to 3.92% (n=4) of those admitted to the medical wards (χ^2=15.74, p=0.015) (Table II).

Approximately eighty one percent (n=258) of MHCU's with a past psychiatric history were discharged (from the MAW). Patients with a past psychiatric history accounted for 83.46% (n=227) of those admitted to the psychiatric wards compared to 55.88% (n=57) of those admitted to the medical wards (χ^2=41.61, p=0.000).

Multinomial logistic regression analysis of the data revealed that the chances of being admitted to either ward (psychiatric or medical ward) increase with advancing age (p=0.0019) and being of female sex (psychiatric ward - p=0.001; medical ward - p=0.003) (Table III). Further, MHCU's admitted to the psychiatric ward were more likely to be unemployed, have a past psychiatric history and have a diagnosis of major mental illness (schizophrenia, substance induced mood/psychotic disorder and mood/psychotic disorder due to general medical conditions) (p< 0.05) (Table IV). MHCU's admitted to the medical wards were less likely to have a history of substance abuse (p< 0.05). After adjusting for gender, MHCU's with a diagnosis of a major mental illness (schizophrenia, substance induced mood/psychotic disorder and mood/psychotic disorder due to general medical conditions) were significantly less likely to be admitted to a medical ward whilst those with a diagnosis of delirium were less likely to be admitted to a psychiatric ward (p< 0.05) (Table V).

Discussion

More than half of the police referrals in this study sample were males, which is in keeping with the South Australian, American and Belgian studies.[3,11,14] Way, et al.[8], in comparing non-police to police referred cases to the emergency room, reported that 72% of police referrals were males compared to 55% of non-police referrals. Although no specific reasons were given in these studies for this finding, dangerousness and threats to others seem to be linked with gender. The probability, as suggested by Way, et al.[8], of being brought by the police presenting as a danger to others is greater if one is male. This is supported by Binder, et al.[15] who, in their study on the relationship of gender to violent behaviour in acutely ill psychiatric patients, found that men engaged in significantly more physical attacks and fear-inducing behaviour than did women and thus were more likely to attract the attention of the police services, either directly or by notification of community members. Another factor contributing to this gender bias is that males were more likely to have a history of substance abuse. Substance abuse often presents with socially unacceptable behaviour and is known to increase the risk of violent behaviour.[16]

More than half of the MHCU's in this study were under 35 years of age. This is similar to studies by Way, et al.[8] who reported a mean age of 34 years and Strauss, et al.[17] who reported a mean age of 37.4 years. Stein, et al.[18] reported that South Africa has a particularly high lifetime prevalence of substance use disorders and that these disorders have an early age of onset (mean age 24yrs), possibly contributing to the above findings.

The majority of MHCU's in this study had only achieved a level of education that was below grade 10, while only 1% had achieved a tertiary level of education. Kneebone, et al.[11] reported that only 10% of their study sample had post secondary education. Several factors may have influenced the level of education achieved in our study. The high incidence (77.97%) of a past history of psychiatric illness suggest an early onset of mental illness impacting on achieved level of education and earlier school dropout. This may be further compounded by the socio-economic status of the individuals from the referral area and the inadequate educational facilities as a result of the previous apartheid system. The finding that the majority of police referrals were male, had a low level of education, were single and unemployed is not necessarily unique but may merely reflect the profile of the 'typical patient' admitted to CHBH as reported by Behr, et al.[19]

Only 6.6% of police referrals in this study were reported as having a previous criminal history. This is in contrast to the 40% of police referrals who had a forensic history, as reported by Kneebone, et al.[11] with assault and theft being the most common offences. The low figure obtained in our study may be due to the fact that many of the admitting doctors did not ask for this information as they felt it not important. This may also possibly arise from the fact that there is no place on the MHCA form 22 to record this information. It is a general belief among psychiatrists that people with major mental illness are no more likely to commit violent crimes than the general population, thus adding to the reasons why doctors may find this information unnecessary. Doctors may also feel that this information influences their therapeutic relationship.[20]

Schizophrenia (28.7%) and Bipolar 1 Disorder (24.2%) were the most frequent diagnoses in this study population. Similar findings were reported by Janofsky, et al.[3] in Maryland, USA. However, a Belgian group[21] found that mood disorders were the most frequent axis I disorders, followed by adjustment disorders, substance use disorders, psychotic spectrum disorders and mental disorders due to medical conditions. In a prospective study of consecutive police psychiatric referrals in Adelaide, Meadows, et al.[10] reported that the most common reasons for referral were threat of self harm (28%) and ''situational crisis'' (29%). Schizophrenia was only diagnosed in 18% of referrals. The authors stated that the relatively low rates of major disorders seen were due to the relatively easy police referral process

and flexible acceptance and admission criteria. One would expect to see more situational crises and social problems at CHBH, especially if the community are using the police as a means of transport. However this does not seem to be the case. It is important to note that of all the SAPS referrals in our study, only one was given a diagnosis of a Personality Disorder. This may possibly be due to: i) time constraints impacting on the quality of medical history obtained by the admitting clinician, (ii) a lack of emphasis put to the obtaining of this information, (iii) unavailability of collateral history at the time of assessment, (iv) difficulties in making a diagnosis of a personality disorder in the presence of active axis I pathology and (v) study or population bias. On the other hand it may be that many of the users referred by the police do not have personality disorders.

Approximately half of all police referrals were

Table III: Multinomial Logistic regression of characteristic versus outcomes (base outcome= discharge from MAW)

Variable								*Likelihood ratio Chi-Square*
	Age group (18-25yrs discharged as the reference)							
	Admission to psychiatric ward / Discharged from ward (reference group)							
Age group	Count(%)	RRR	SE	Z	P>Z	95%CI	95%CI	
18-25yrs	54(19.85)	1.00	-	-	-	-	-	
26-35yrs	90(33.09)	1.30	0.292	1.19	0.233	0.842	2.025	
36-50yrs	89(32.72)	1.59	0.364	2.04	0.042	1.017	2.494	
51-60yrs	34(12.50)	2.19	0.690	2.49	0.013	1.181	4.065	
	Admission to medical ward / Discharged from ward (reference group)							
Age group	Count(%)	RRR	SE	Z	P>Z	95%CI	95%CI	
18-25yrs	9(8.82)	1.00	-	-	-	-	-	
26-35yrs	39(38.24)	3.39	1.346	3.08	0.002	1.561	7.388	
36-50yrs	38(37.25)	4.08	1.632	3.52	0.000	1.863	8.939	
51-60yrs	12(11.76)	4.64	2.301	3.09	0.002	1.755	12.26	
								No of obs = 678 LR χ^2 = 20.96 Prob>χ^2 = 0.0019 Pseudo R^2 = 0.0154
	Gender (Males discharged as the reference)							
	Admission to psychiatric ward / Discharged from ward (reference group)							
Gender	Count(%)	RRR	SE	Z	P>Z	95%CI	95%CI	
Male	209(76.84)	1.00	-	-	-	-	-	
Female	63(23.16)	2.16	0.483	3.46	0.001	1.397	3.352	
	Admission to medical ward / Discharged from ward (reference group)							
Gender	Count(%)	RRR	SE	Z	P>Z	95%CI	95%CI	
Male	77(75.49)	1.00	-	-	-	-	-	
Female	25(24.51)	2.33	0.668	2.95	0.003	1.328	4.088	
								No of obs = 693 LR χ^2 = 15.17 Prob>χ^2 = 0.0005 Pseudo R^2 = 0.0109
	Employment (Unemployed discharge as the reference)							
	Admission to psychiatric ward / Discharged from ward (reference group)							
Employment	Count(%)	RRR	SE	Z	P>Z	95%CI	95%CI	
Unemployed	13(4.74)	1.00	-	-	-	-	-	
Employed	224(81.75)	0.50	0.175	-1.96	0.050	0.259	1.000	
	Admission to medical ward / Discharged from ward (reference group)							
Employment	Count(%)	RRR	SE	Z	P>Z	95%CI	95%CI	
Unemployed	11(10.78)	1.00	-	-	-	-	-	
Employed	73(69.52)	1.22	0.476	0.52	0.601	0.571	2.626031	
								No of obs = 607 LR χ^2 = 5.49 Prob>χ^2 = 0.0644 Pseudo R^2 = 0.0046

discharged directly from the MAW. This could possibly be due to the fact that MHCU's, once removed from the volatile situation pre-admission, settle and voluntarily accept treatment, thus reducing the need for admission to hospital in favour of outpatient care. This approach is supported by the MHCA[12,13] which states that MHCU's must be treated in the least restrictive environment and that MHCU's who do not meet criteria for admission are required to be discharged for care on an outpatient basis. Finally, resource constraints and bed shortages may play a crucial role in

Table IV: Multinomial Logistic regression of characteristic versus outcomes (base outcome= discharge from MAW)

Characteristic								*Likelihood ratio Chi-Square*
	Substance Abuse							
	Admission to psychiatric ward / Discharged from ward (reference group)							
	Count(%)	RRR	SE	Z	P>Z	95%CI	95%CI	
Positive	146(53.68)	1.00	-	-	-	-	-	No of Obs = 494 LR χ^2 =17.73 Prob>χ^2 = 0.0001 Pseudo R^2 = 0.0188
Negative	49(18.01)	0.741	0.170	-1.30	0.192	0.472	1.162	
	Admission to medical ward / Discharged from ward (reference group)							
	Count(%)	RRR	SE	Z	P>Z	95%CI	95%CI	
Positive	27(26.47)	1.00	-	-	-	-	-	
Negative	26(25.49)	0.258	0.082	-4.26	0.000	0.138	0.481	
	Past Psychiatric History							
	Admission to psychiatric ward / Discharged from ward (reference group)							
	Count(%)	RRR	SE	Z	P>Z	95%CI	95%CI	
Positive	227(83.46)	1.00	-	-	-	-	-	No of obs = 660 LR χ^2 =19.87 Prob>χ^2 = 0.0000 Pseudo R^2 = 0.0152
Negative	39(14.34)	1.08	0.253	0.34	0.734	0.684	1.713	
	Admission to medical ward / Discharged from ward (reference group)							
	Count(%)	RRR	SE	Z	P>Z	95%CI	95%CI	
Positive	57(55.88)	1.00	-	-	-	-	-	
Negative	31(30.39)	0.32	0.088	-4.13	0.000	0.191	0.554	
	Diagnosis							
	Admission to psychiatric ward / Discharged from ward (reference group)							
		RRR	SE	Z	P>Z	95%CI	95%CI	
		1.00	-	-	-	-	-	No of Obs = 692 LR χ^2 =111.79 Prob>χ^2 = 0.0000 Pseudo R^2 = 0.0802
Schizophrenia		1.40	0.504	0.94	0.347	0.693	2.837	
SIMPD		0.77	0.260	-0.86	0.390	0.369	1.474	
MP2GMC		0.62	0.221	-1.33	0.184	0.312	1.250	
Delirium		0.21	0.134	-2.43	0.015	0.060	0.738	
BMD		0.47	0.438	-0.81	0.420	0.077	2.901	
	Admission to medical ward / Discharged from ward (reference group)							
		RRR	SE	Z	P>Z	95%CI	95%CI	
		1.00	-	-	-	-	-	
Schizophrenia		0.20	0.091	-3.52	0.000	0.082	0.490	
SIMPD		0.15	0.066	-4.36	0.000	0.066	0.356	
MP2GMC		0.20	0.084	-3.88	0.000	0.094	0.461	
Delirium		1.58	0.709	1.03	0.305	0.657	3.810	
BMD		2.11	1.467	1.07	0.282	0.540	8.245	

encouraging outpatient care. If one has to consider that there are only 0.22 mental health staff per bed in Gauteng Province[22] and an overall 19.5 staff per 100 000 population in the public mental health services in South Africa[23], it is understandable that MHCP's tend to refer MHCU's for treatment and management in a community based out-patient setting.

This study found that amongst police referrals, a significant factor associated with discharge without admission was a history of substance abuse. However, contradictory to this finding, Deraas, et al.[24] in a retrospective, record based, descriptive study comprising 101 acute psychiatric referrals, noted substance abuse in one third of police assisted admissions. Similarly, Gillis, et al.[25] found that readmissions amounted to 42% of the total admissions and that substance abuse is often one of the reasons for relapse and readmission. The low overall admission rate of 38% of all police referrals in this study to the psychiatric ward could possibly be explained by the high rate of substance abuse (53% of the police referrals in this study). Psychotic symptoms associated with substance intoxication may settle once the offending substance is withdrawn and therefore not necessitate an admission to a psychiatric ward but more appropriately be referred to substance abuse treatment facilities. Appropriately, MHCU's diagnosed with delirium, substance abuse and no past psychiatric history were more likely to receive an admission to a medical ward rather than to a psychiatric ward. Significantly, 14% of police referrals admitted to the medical admissions ward as suspected mentally ill patients required ultimately an admission to a medical ward for a medical condition. It is most likely that the admitting Emergency Department doctor failed to adequately physically examine the suspected MHCU and inappropriately referred the MHCU to the psychiatric registrar for a psychiatric evaluation. This is similar to the study of Redlemeier, et al.[26] who reported that individuals with serious mental illness are often not adequately assessed and consequently less likely to receive potentially life-saving interventions for other chronic conditions. It is the responsibility of all health care professionals to play a greater advocacy role for the medical needs of MHCU's.

As in any retrospective study design, some data might not have been recorded in case notes. However, every reasonable effort was made to collate information from the MHCA form 22 and the hospital notes. The design of the study was such that only MHCU's with completed MHCA form 22 were regarded as being referred by SAPS. Some MHCU's might have been erroneously included or excluded. MHCU's may have been referred by the police but not have a MHCA Form 22 completed and thus, excluded from the study. The emergency doctors (not trained mental health care professionals) documented the presence of mental illness on clinical judgement alone and not necessarily based on The Diagnostic and Statistical Manual of Mental Disorders, text revision, 4th edition. (DSM IV TR) criteria. Other reported factors, like readmissions and homelessness associated with outcomes were not considered in this study and would be better obtained via other study designs. This study may not be generalisable to other provinces/areas with dissimilar procedures of SAPS referrals, emergency evaluations at the Emergency department or to hospitals with different referral bases or populations.

Table V: Multinomial Logistic regression of diagnosis versus outcomes after adjusting for gender (base outcome= discharge from MAW)

Diagnosis							*Likelihood ratio Chi-Square*
	Admission to psychiatric ward / Discharged from ward (reference group)						
	RRR	SE	Z	P>Z	95%CI	95%CI	
	1.00	-	-	-	-	-	
Schizophrenia	1.31	0.477	0.76	0.449	0.646	2.679	
SIMPD	0.86	0.292	-0.57	0.572	0.405	1.646	
MP2GMC	0.71	0.258	-0.92	0.358	0.354	1.454	
Delirium	0.21	0.139	-2.38	0.017	0.061	0.762	
BMD	0.39	0.371	-0.99	0.324	0.064	2.473	
Female	1.83	0.448	2.47	0.014	1.132	2.959	
	Admission to medical ward / Discharged from ward (reference group)						
	RRR	SE	Z	P>Z	95%CI	95%CI	
	1.00	-	-	-	-	-	
Schizophrenia	0.19	0.087	-3.61	0.000	0.077	0.467	
SIMPD	0.16	0.072	-4.11	0.000	0.071	0.392	
MP2GMC	0.23	0.096	-3.51	0.000	0.105	0.527	
Delirium	1.62	0.731	1.07	0.283	0.670	3.924	
BMD	1.81	1.280	0.85	0.397	0.456	7.230	
Female	1.69	0.568	1.57	0.116	0.877	3.271	

No of obs = 692
LR χ^2 = 118.60
Prob>χ^2 = 0.0000
Pseudo R^2 = 0.0851

Conclusion

This is the first study to our knowledge of police referrals to a general hospital in South Africa. As is the case in most countries with new mental health legislation, the MHCA has resulted in a large number of referrals by the police to mental health services in this study setting. However, the majority of the referrals were not deemed necessary by the admitting psychiatrists and many MHCU's ended up being discharged. These MHCU's are often discharged to an under-resourced and overloaded outpatient community service where they are often not adequately treated or referred for substance rehabilitation. Although strictly speaking the MHCU's are appropriately referred by the police in terms of the requirements of section 40 of the MHCA, these referrals may not necessarily be deemed appropriate in terms of psychiatric admission criteria.

It is recommended that the receiving facility should have the capacity to identify and divert MHCU's with substance abuse problems to appropriate treatment facilities without admitting them into the hospital. Although currently, this may fall outside the realms of the referring police officer, it should be identified as a possible future training objective. Other areas of training and development should include training of SAPS members in identification of common psychiatric conditions and MHCP's in the correct implementation of the MHCA.

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Appendix 1

MHCA 22

DEPARTMENT OF HEALTH

HANDING OVER CUSTODY BY THE SOUTH AFRICAN POLICE SERVICES (SAPS) OF A PERSON SUSPECTED OF BEING MENTALLY ILL OR SEVERELY OR PROFOUNDLY INTELLECTUALLY DISABLED AND LIKELY TO INFLICT SERIOUS HARM
[Section 40(1) of the Act]

I .....

(print rank, initials and surname of member of SAPS)

have reason to believe from personal observation or from information obtained from a mental health care professional that .....

.....

.....

.....

(user's name or description if no name is available)

is suffering from a mental disability and is likely to inflict serious harm.

I have apprehended the person and have brought him / her to .....

.....

(name of health establishment)

for assessment by a mental health care practitioner.

Name and address of next of kin (where possible)

.....

.....

.....

I hereby hand over custody of the said person to the head of the health establishment or his / her designate.

Signature: .....

(member of SAPS)

Date: .....

Time: .....

Place: .....

Appendix 1 continued

2

I .....

(name of head of health establishment or designated person)

accept custody of .....

(name of user or description if no name is available)

at the .....

(name of health establishment)

The user's physical condition is as follows (describe any bruises, lacerations etc):

.....

.....

.....

.....

.....

The user will be assessed by two mental health care practitioners in terms of section 33 of the Act.

Signature: .....

(head of health establishment or designated person)

Date: .....

Time: .....

Place: .....

[Copy to be sent to SAPS to confirm in writing the physical condition as stated above during handing over of custody]

The SAPS hereby confirms that the physical condition as stated above was present during the handing over of the user in terms of section 40(1) of the Act.

Print initials and surname: .....

Signature: .....

(member of SAPS who handed over custody)

Date: .....

Place: .....

[Copy to Review Board]