

ORIGINAL ARTICLE

Patient engagement with primary health care following discharge from community mental health services

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Abstract

Aim Increasing pressure is being placed to facilitate Community Mental Health (CMH) patients' discharge to primary care. However, engagement following discharge is an under-researched area. This audit aimed to measure engagement and explore the factors that are associated with engagement in primary care following discharge from CMH.

Method Primary care teams for 55 service users discharged from Auckland District Health Board CMH centres between July and December 2012 were approached as part of an audit and asked to provide information regarding engagement with general practitioners.

Results From the 50 responses received, the median number of GP visits per year was 3.7 and the mean was 4.41. 72% of the sample had contact with their GP at least every 3–4 months, however 8% did not engage with their primary care team. Differences in attendance following discharge based on age, diagnosis or socioeconomic status were not found. There was a suggestion that where GPs had responsibility for ongoing prescribing individuals engaged more frequently.

Conclusion Generally, discharged individuals engage with their primary care team well, and at a level many clinicians would be comfortable with. There is a proportion of the population that does not engage at this level, which requires further study.

In the past two decades, mental health services in New Zealand have been transformed dramatically with the closure of the last psychiatric hospitals in the early 1990s to the increased focus on community care seen in the early 2000s.¹ Demographic change, population growth and fiscal pressures are encouraging clinical services to consider fundamental changes to the provision of mental health services.

The current mental health spend is around \$1 billion of the Health New Zealand annual budget, yet access to services have been restricted to a relatively narrow segment of the population with the most severe conditions.^{1,2} Mental and neurological disorders are expected to account for an increasing share of the burden of illness in the population in coming years.³

New models of care are necessary to address the growing mental health needs of the general population, whilst continuing to support the recovery and re-integration of people with mental illness into the community. Better integration between primary and secondary services is needed. Additionally, there is considerable scope to encourage greater patient directed care in treating enduring mental health issues utilising a chronic disease model focusing on an informed-activated patient, and a prepared, proactive practice team.^{4,5}

The Mental Health Commission's vision document for the development of mental health services, Blueprint II,⁶ suggested a future model of care where people with mental illness will experience episodes of specialist care. It is proposed service users flow easily between primary and specialist care, but where episodes in secondary services are shorter than they currently are. However, there has been little study of engagement following discharge from community mental health centres (CMHC) to general practitioners (GPs).⁷ Furthermore, there appears to be anecdotal evidence that there is some reluctance among secondary mental health (SMH) clinicians to discharge individuals to GPs.

The lack of research is worrying, considering the quality of engagement and the relationship with GPs is seen as one of the key factors in predicting a successful discharge from CMHC.⁸ It is important to note that the relatively small amount of literature that exists has shown shared care programmes with GPs do not compromise patient health.^{8,9}

This audit aimed to measure engagement and explore the factors that are associated with engagement with primary care following discharge from CMHC.

Method

Design, setting and sample—The audit was set in the Auckland District Health Board's (ADHB) four key CMHCs, which are geographically dispersed through ADHB's catchment area. Clients that were discharged from CMHC's care and recovery teams between 1 July 2012 and 31 December 2012 were identified from HCC, ADHB's mental health patient management system.

From the 731 individuals identified as meeting these criteria, 100 individuals were randomly selected by utilising random number generation. A sample of 100 was decided upon due to the pilot nature of this study and the resource constraints of the audit. A dataset was created from HCC detailing the NHI, gender, date of birth, ethnicity, domicile, GP details, readmission status, diagnosis, and, discharge dates and type for the 100 individuals. Of the initial sample of 100, 55 clients were identified as being discharged to their GPs.

The remaining 45 individuals were excluded from the study, as they were determined as not having been discharged to a GP. The exclusion criteria were discharge to another ADHB service, of which 19 individuals were. Services referred to within ADHB included Maternal, Māori, and Pacific Mental Health, and inpatient care. Individuals who moved out of the ADHB boundary, discharged to self, discharged due to lost to follow up, or deceased were also excluded.

Data collection and analysis—A letter requesting information was faxed to each of the client's last recorded GP. GP practices received a follow-up call from a Primary Care Liaisons co-ordinator or researchers to assist in the completion and return of the audit sheet. The audit sheet contained eight closed ended questions.

Questions were regarding the number of GP visits, prescriptions renewed, and blood tests ordered, as well as the completion of metabolic screening and a shared care planning session. The number of GP visits was determined by the number of face-to-face contacts an individual had with a GP. GP visits per year were utilised for analysis due to the potential 6 months difference in time elapsed since discharge between individuals included in the sample. The availability of discharge letters and utilisation of additional funding was also included. A free text box was also provided for PHC clinicians to make comments regarding their experiences or thoughts regarding secondary mental health services.

The domicile code for the last known residential address was matched with the respective census area unit to identify the appropriate New Zealand Deprivation Index. Data was analysed using SPSS Version 21. Some variables were collapsed and recoded to enable hypothesis testing and for descriptive purposes. For example mood disorders included bipolar and unipolar disorders. Mann-Whitney and Kruskal-Wallis tests were utilised as significance tests due to the non-normal distribution of the dataset and use of both ordinal and interval variables.

Sample details and representativeness—Of the 55 individuals included in the sample, 29 were male and 26 were female, and the mean age was 43.9 years. Overall, a 91% response rate was achieved with 50 GPs completing and returning the request for information.

Table 1 shows the sociodemographics and case details of the population, the initial randomly selected sample of 100, the sample of 55 contacted as part of this research, as well as the final 50 who responded to the request for information. No significant differences were found between those GPs who responded and those who did not.

Table 1: Demographics and characteristics of population and samples

Variables	Population (n=733)	Initial sample (n=100)	Sample contacted (n=55)	Responded sample (n=50)
Gender	50.5% Male, 49.5% Female	52.0% Male, 48.0% Female	52.7% Male, 47.3% Female	56.0% Male, 44.0% Female
Ethnicity				
NZ European	53.0%	53.0%	61.8%	62.0%
Māori	14.7%	16.0%	3.6%	4.0%
Pasifika (Pacific peoples)	4.9%	3.0%	1.8%	2.0%
Asian	9.9%	13.0%	20.0%	20.0%
Other	17.5%	15.0%	12.8%	12.0%
Age	$M=40.7$ years, $SD=13.4$	$M=42.5$ years, $SD=13.2$	$M=43.4$ years, $SD=12.1$	$M=43.9$ years, $SD=11.5$
NZ Deprivation Index				
Lowest quintile (NZDep 1–2)	9.3%	11.2%	16.4%	18.3%
Highest quintile (NZDep 9–10)	21.3%	25.3%	18.1%	18.3%
Days C&R Case Open	$ME=200$ days, $IQR=471$	$ME=210$ days, $IQR=469$	$ME=204$ days, $IQR=414$	$ME=200$ days, $IQR=426$
Case Referral Source				
GP	40.2%	40.0%	52.7%	52.0%
Family/Friend	6.8%	6.0%	3.6%	4.0%
Self	8.6%	10.0%	10.9%	10.0%
Other service	44.4%	56.0%	32.8%	34.0%
Discharge to				
GP	60.0%	60.0%	100%	100%
Self	5.9%	7.0%	0%	0%
Other service	30.6%	29.0%	0%	0%
Other	3.5%	4.0%	0%	0%
Diagnosis				
Mood disorder	<i>Unknown</i>	46.0%	63.6%	60.0%
Anxiety disorder		5.0%	9.1%	10.0%
Psychosis disorder		32.0%	18.2%	20.0%
No diagnosis		7%	0%	0%
Other		10.0%	9.1%	10.0%

Results

Overall, the median number of GP visits per year was 3.70, and the mean was 4.41. Figure 1 displays the distribution of GP visits per year in a histogram, which shows a positively skewed, bimodal distribution. It highlights that 72% of the sample saw their GP at least 3 times per year.

GP visits are detailed according to sample characteristics in Table 2 below using medians due to the non-normal distribution of the dataset. The test statistics and p-values are reported for each variable. No significant results were found, however probable significant differences might be seen in gender, days case open and deprivation levels.

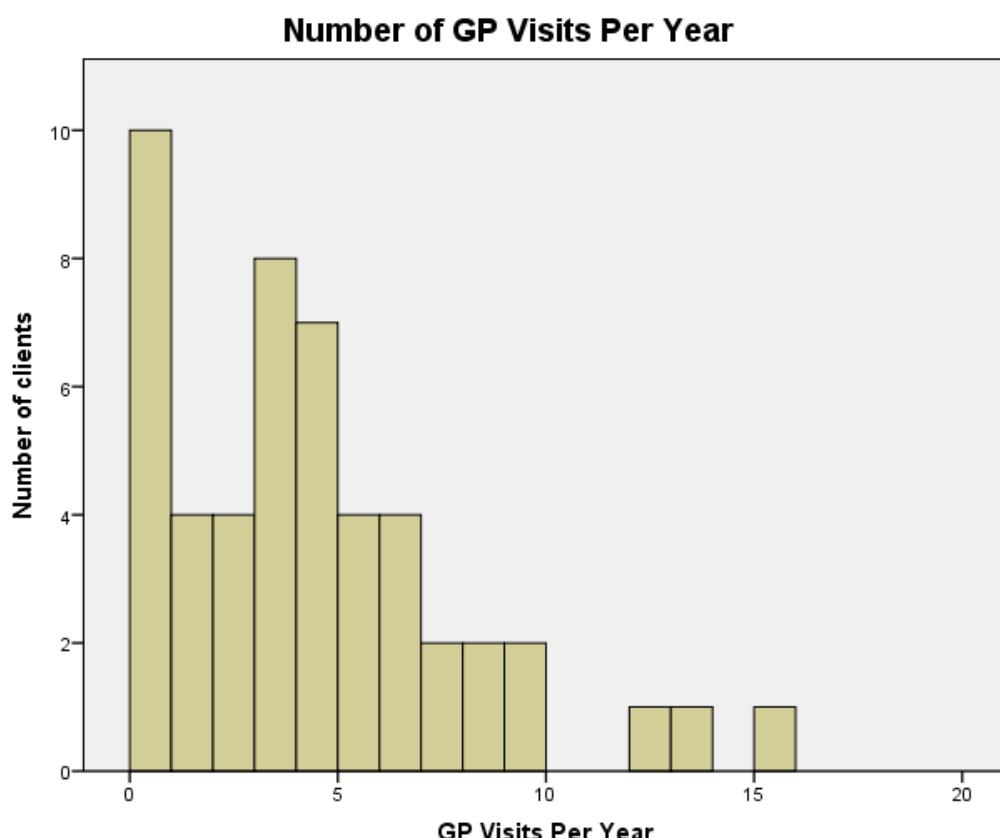
Table 2. Median (ME), mean (M) and interquartile range (IQR) for GP visits per year and respective p-value from hypothesis testing

Sample	Sample (n=50)	GP Visits/Year	P-value
		ME=4.41 (SD=3.54), ME=3.70 (IQR=4.4)	
Gender			
Male	56%	ME=3.25 (IQR=3.7)	0.080
Female	44%	ME=4.65 (IQR=5.1)	
Ethnicity			
NZ European	62%	ME=3.70 (IQR=4.6)	0.734
Minority Ethnicities	38%	ME=4.70 (IQR=4.4)	
Age			
18–34 years	24%	ME=3.70 (IQR=4.2)	0.459
35–50 years	50%	ME=3.85 (IQR=4.5)	
50+ years	26%	ME=4.00 (IQR=5.0)	
NZ Deprivation Index			
Least deprived quintile (NZDep 1–2)	18%	ME=2.40 (IQR=2.8)	0.347
Most deprived quintile (NZDep 9–10)	18%	ME=4.60 (IQR=4.8)	
Days C&R Case Open			
< 6 months	44%	ME=4.00 (IQR=3.3)	0.200
6 months > 1 year	18%	ME=6.00 (IQR=6.2)	
1+ year	38%	ME=3.50 (IQR=3.4)	
Case Referral Source			
GP	52%	ME=3.60 (IQR=3.3)	0.915
Other	48%	ME=4.30 (IQR=5.2)	
Case Discharge Type			
No further follow-up	54%	ME=3.70 (IQR=6.1)	0.489
Service not required	46%	ME=4.00 (IQR=2.7)	
Diagnosis			
Mood disorder	60%	ME=3.45 (IQR=3.9)	0.198
Anxiety disorder	10%	ME=6.50 (IQR=3.0)	
Psychosis disorder	20%	ME=3.35 (IQR=4.1)	
Other	10%	ME=4.60 (IQR=7.1)	
Readmission Status			
Readmitted	20%	ME=4.45 (IQR=3.9)	0.707
Not readmitted	80%	ME=3.70 (IQR=4.5)	
GP Discharge Summary			
Accessible on PMS	50%	ME=4.70 (IQR=3.2)	0.367
Not accessible/received	50%	ME=3.35 (IQR=4.4)	
GP Account Status			
Outstanding invoice	24%	ME=4.05 (IQR=6.5)	0.312
No outstanding invoice	76%	ME=3.85 (IQR=3.7)	
Mental Health Prescriptions			
Renewed under GP	68%	ME=4.70 (IQR=4.6)	0.003**
Not renewed	32%	ME=1.70 (IQR=4.6)	
Blood Tests Requested			
1+ requested by GP	48%	ME=3.70 (IQR=4.5)	0.264
No requests	52%	ME=3.85 (IQR=4.6)	
CVD Risk Assessment			
Completed	44%	ME=4.15 (IQR=4.7)	0.445
Not completed	56%	ME=3.70 (IQR=3.9)	

Note: *=<0.05, **=<0.005.

Readmission rates were analysed further according to the level of engagement. It was found that of the low engagers (0–2 visits per year) and high engagers (5.01 visits per year or greater) the readmission rate was 21.4% and 23.5%, respectively. This is compared to the 15.8% readmission rate of normal, or the remaining, engagers. However, the readmission rates between groups were not statistically significant ($H=0.354$, $df=2$, $p=0.838$).

Figure 1. Frequency of GP visits per year



During follow-up phone conversations and on the request for information sheets returned, some GPs and practice nurses shared their thoughts regarding the transition from CMHC to GPs for their patients.

Patients discharged from [CMHCs] have such high expectations when they come and see us. It's difficult to meet their needs when they are used to a lot more support [being provided by SMH] We just don't have the time.
Practice Nurse

It isn't unusual to not hear back after seeking advice [from a CMHC], you can leave voice messages but there is no guarantee they will get back to you.
General Practitioner

With this patient we didn't know she had any involvement with [SMH] until she told us in the months following her discharge.
General Practitioner

In contrast, one clinic made a note of the excellent communication and support provided by the CMHC. This suggests there may be a great deal of variability in the standard of communication between CMHCs and primary care.

Discussion

Our audit showed that individuals who are discharged to GPs following an episode of care provided within CMHC do, generally, engage well with primary care. 72% of the sample had contact with their GP, on average, at least every three to four months. We would assert that engagement at this level would be reassuring for many clinicians whose patients have been discharged from specialist SMH services.

Despite the small sample size, our findings are consistent with existing literature on PHC engagement for people with serious mental illnesses in other countries. Reilly and colleagues reported the median number of contacts British individuals with bipolar disorder or schizophrenia made with primary care was three when GP was the sole provider of care, and four when care was provided by SMH.⁷

An Irish outpatient review reported that 48.6% of the discharged population from CMHCs had contact with their PHC team at least four times in the year following discharge from SMH services.¹⁰ This study's findings suggest that a greater proportion of individuals who are discharged into GP care are engaging at an adequate level, when compared to the international literature described above.

Furthermore, our findings are comparable with New Zealand data on the utilisation of PHC in the general population. Data analysed by Cumming and colleagues from the 2002/03 New Zealand Health Survey (NZHS) shows that 81% of the population visit a GP in a single year, similar to the 80% of individuals who visited a GP, on average, more than once per year in our sample.¹¹ This rate is similar to the subsequent NZHS survey in 2012/13 of 78.8%.¹²

It appears that if discharged individuals engage, they are more likely to visit their GP more often than the general population. 64% of the sample visited their GP at least three times a year, compared to 43% of the general population.¹¹ The similarity of utilisation would suggest that the majority of individuals discharged from CMHCs are engaging with their GP at an appropriate level, at the least in context of the general population. The relative over-utilisation by discharged sample may reflect the greater degree of morbidity present in individuals discharged from CMHCs.

Females tended to visit their GP more often than males, which is consistent with studies demonstrating that females are more likely to engage and display help-seeking behaviour.¹³ No significant difference was found between the age groups of 18–34 years, 35–50 years and 50+ years as was originally predicted. Furthermore, based on the 10 individuals who were readmitted to SMH, there was no difference in GP engagement between those who were readmitted and those who were not. This suggests that poor engagement is not necessarily an accurate predictor of worse outcomes. However, it should be noted that the sample is too small to make meaningful comparisons between demographic and clinical groups.

The findings showed that individuals whose GPs had prescribing responsibility and prescribed mental health pharmaceuticals following discharge, had more contact with their GP than those individuals who were not prescribed anything by their GP. 68% of the sample had mental health related prescriptions renewed by their GP, visited their GP a median of 4.7 a year, compared to the median of 1.7 a year for those who did not.

This may suggest that encouraging greater prescribing of psychotropic medication by GPs in a shared care arrangement may help with engagement in primary care following discharge. Alternatively, it could be simply inferred that those who do not engage with their GP do not have prescriptions renewed, and therefore not adhering to prescriptions made at discharge. This could represent a significant issue with, potentially, 32% of the sample not continuing with treatment plans. However, we were not able to differentiate between individuals who were and were not discharged with instructions for prescription renewal.

Contrary to the initial hypothesis, findings suggest individuals who are more socioeconomically deprived are not likely to engage less than individuals from less socioeconomically deprived backgrounds. Interestingly, findings showed individuals who lived in the most deprived areas (NZDep 9–10) visited their GP more often than those who live in the least deprived areas (NZDep 1–2). This result is noteworthy due to the existence of GP co-payments in New Zealand, and that financial barriers have been established as a key barrier to accessing PHC.^{14,15}

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Finding no significant difference in GP visits between socioeconomic groups in a discharged population, with data even signifying a reverse relationship than what would normally be expected, albeit being non-statistically significant, is promising for the feasibility in discharging mentally stable individuals to GPs.

Compared to the 2006/07 NZHS data, which is the latest to provide median GP visits for each NZDep decile, the most deprived quintile reported 3.0 visits in the last 12 months, compared to 4.6 average visits per year from this sample.¹⁶ Furthermore, the least deprived reported 2.0, compared to 2.4. Possible explanations for this may be the requirement of medical certificates for social welfare programmes, or the increased burden of physical illness for the most socioeconomically deprived.¹⁷ Again, it must be noted the sample is too small to draw meaningful conclusions.

Our findings suggest that most individuals do engage with their GPs following discharge, and therefore support the development of greater integration and co-ordination of primary care services for people with severe mental health needs. This is also consistent with the stepped care, and recovery and resilience models envisioned in Blueprint II, and reiterated in the Mental Health and Addictions Service Development Plan.^{1,6} It may also suggest that there is scope for evolving secondary mental health services to further increase their capacity to cater for the episodic needs of individuals with low and high prevalence disorders, but where proportionately less of their time is spent in secondary care.

However, significant challenges are evident. Only 50% of the sample's PHC team had access to the individual's discharge summary on the practice management system for that episode of care provided by the CMHC. This is of concern for the mental health sector when New Zealand is otherwise praised internationally for the uptake of electronic medical records, and prevalence of same-day electronic discharge summaries within general medicine and surgery.^{18,19} It was not ascertained whether this relatively low access was due to errors on part of the PHC team or the CMHC team. Concern is exacerbated with the anecdotal reports from GPs, reported earlier, regarding their difficulties of communicating with CMHC regarding patient care.

The ability of PHC to sufficiently co-ordinate care and support discharged individuals is challenged while these issues exist. It is also important to note that 8% of the sample never saw a GP following discharge. Given that most mental disorders are either chronic conditions or episodic with high rates of relapse this must be considered a less than ideal outcome. However, as shown in Rodenburg and colleague's Wellington Mental Health Liaison evaluation, a carefully designed training and support system for GPs can result in the provision of high quality community-based mental health care for individuals with enduring difficulties.²⁰

The findings of this audit need to be considered within the context of a number of limitations. Firstly, the sample size was small and this limited the power of the study. Secondly, the scope was limited to only Care and Recovery team within SMH. This excluded early intervention, and community outreach teams, and Maori and Pacific SMH teams, and therefore certain population groups, particularly Maori, were underrepresented in the sample. Additionally, this audit was limited to service users who were discharged to their GPs, and excluded those lost to follow up or discharged to self. We were also surprised to find that so few of the service users 'discharged' by secondary services were truly discharged from secondary care, and this would suggest the need for further investigation to better understand the barriers to discharge.

Future research should focus on refining our understanding of poor engagers, which may allow for better identification and support with improved discharge planning across primary and secondary services. Additionally, qualitative research should focus on the nature, content and quality of the contacts individuals have with their GPs following discharge.

We have also been surprised by the paucity of data in this area given the size of mental health expenditure and relatively high impact mental illness has on the population burden of disease. The New Zealand model of primary care, with strong features of provider capitation fees and patient co-payments, differs significantly from health systems where integrated models of care are being developed, such as the United Kingdom (universal compulsory GP enrolment and free at point of use) and Canada (universal insurance and free at the point of use). Service level research and intervention trials with measurable outcomes should be an integrated part of mental health reforms and service development to ensure that these interventions are applicable in a New Zealand context.

In summary, this audit of discharged individuals and their engagement within PHC has demonstrated the majority of individuals engage at an appropriate level. It has highlighted a smaller but significant proportion of poor engagers, hopefully prompting improved discharge planning to support post-discharge engagement, and further questions regarding the quality of engagement.

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The audit has suggested recovery and resiliency can be adequately supported due to the high proportion of people who engage at a sufficient level. This is reinforced by the findings that no significant differences were found regarding potential poor engagement predictors, including age, socioeconomic status, and diagnosis. Despite the small sample size of the study, findings support the practicability of the stepped care model in regards to the safe discharge of mentally stable individuals to PHC.

Competing interests: Nil.

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