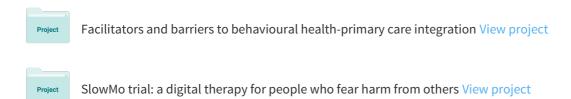
See discussions, stats, and author profiles for this publication at: https://www.researchgate.net/publication/280350044

# Acute mental health service use by patients with severe mental illness after discharge to primary care in South London

	in Journal of Mental Health · July 2015 9/09638237.2015.1036968		
CITATIONS	S R	EADS	
0	4	13	
6 autho	rs, including:		
	Parashar Pravin Ramanuj Royal National Orthopaedic Hospital NHS Trust  14 PUBLICATIONS 8 CITATIONS		Carlos Carvalho  Ars Norte Administração Regional de Saúde  6 PUBLICATIONS 72 CITATIONS
	SEE PROFILE		SEE PROFILE
	Philippa Garety		Thomas K J Craig
	King's College London		King's College London
	250 PUBLICATIONS 13,911 CITATIONS		<b>244</b> PUBLICATIONS <b>5,806</b> CITATIONS
	SEE PROFILE		SEE PROFILE

Some of the authors of this publication are also working on these related projects:





#### Journal of Mental Health



Date: 06 July 2016, At: 08:23

ISSN: 0963-8237 (Print) 1360-0567 (Online) Journal homepage: http://www.tandfonline.com/loi/ijmh20

## Acute mental health service use by patients with severe mental illness after discharge to primary care in South London

Parashar P Ramanuj, Carlos FA Carvalho, Robert Harland, Philippa A Garety, Tom KJ Craig & Nicola Byrne

**To cite this article:** Parashar P Ramanuj, Carlos FA Carvalho, Robert Harland, Philippa A Garety, Tom KJ Craig & Nicola Byrne (2015) Acute mental health service use by patients with severe mental illness after discharge to primary care in South London, Journal of Mental Health, 24:4, 208-213, DOI: 10.3109/09638237.2015.1036968

To link to this article: <a href="http://dx.doi.org/10.3109/09638237.2015.1036968">http://dx.doi.org/10.3109/09638237.2015.1036968</a>

	Published online: 23 Jul 2015.
Ø,	Submit your article to this journal $oldsymbol{\mathcal{C}}$
ılıl	Article views: 117
a <sup>L</sup>	View related articles 🗗
CrossMark	View Crossmark data 🗗

Full Terms & Conditions of access and use can be found at http://www.tandfonline.com/action/journalInformation?journalCode=ijmh20

## Journal of MENTAL HEALTH

#### http://tandfonline.com/ijmh ISSN: 0963-8237 (print), 1360-0567 (electronic)

J Ment Health, 2015; 24(4): 208–213 © 2015 Taylor & Francis, LLC. DOI: 10.3109/09638237.2015.1036968



ORIGINAL ARTICLE

### Acute mental health service use by patients with severe mental illness after discharge to primary care in South London

Parashar P Ramanuj<sup>1</sup> Carlos FA Carvalho<sup>2,3</sup>, Robert Harland<sup>4</sup>, Philippa A Garety<sup>5,6</sup>, Tom KJ Craig<sup>7</sup>, and Nicola Byrne<sup>4</sup>

<sup>1</sup>General Adult Psychiatry, South London and Maudsley NHS Foundation Trust, London, UK, <sup>2</sup>European Programme for Intervention Epidemiology Training (EPIET) Fellow, Public Health England, London, UK, <sup>3</sup>European Centre for Disease Prevention and Control, Stockholm, Sweden, <sup>4</sup>Psychosis Clinical Academic Group, South London and Maudsley NHS Foundation Trust, London, UK, <sup>5</sup>Institute of Psychiatry, Psychology and Neuroscience, King's College London, UK, <sup>6</sup>Psychosis Clinical Academic Group, South London and Maudsley NHS Foundation Trust, London, UK, and <sup>7</sup>Health Service and Population Research Department, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, UK

#### **Abstract**

Background: To return the patients to primary care is arguably the desired service outcome for community mental health teams (CMHTs).

Aims: To assess acute mental health service use (hospitalisation or Home Treatment Team) by people with severe mental illness following discharge to primary care.

*Method*: Retrospective cohort study comparing receipt and duration of acute care by 98 patients in the two years following discharge to primary care from CMHT, with a cohort of 92 patients transferred to another CMHT.

Results: The discharged group was significantly more stable on clinical measures. Fifty-seven (58.2%) patients were re-referred after median 39 weeks, with 35 (60.3%) in crisis. The difference in acute service use between discharged patients (27.9 days/patient) and transferred patients (31.7 days/patient) was not significant. Hospitalisation in the two years prior to discharge or transfer increased the odds of re-referral (OR 3.93, 95% CI 1.44–14.55), subsequent acute service use (OR 1.02, 95% CI 1.01–1.03) and duration of input (0.45 extra days/patient, 95% CI 0.22–0.68).

Conclusions: The majority of the discharged patients were re-referred to mental health services. Although these were more stable, there was no difference from the transferred group on acute service use. Further support may be required in primary care to maintain stability.

#### Keywords

Community mental health, primary care, discharge, resource utilization

#### History

Received 1 August 2014 Revised 27 January 2015 Accepted 9 March 2015 Published online 21 July 2015

#### Introduction

Mental health services in England are arranged around a stepped care model in which increasing clinical need drives movement from least to most intense service intervention (NICE, 2011). On the basis of need, people with severe mental illness (SMI) move from being cared for largely by general practitioners (GPs) in primary care, through to specialist mental health services organised as community mental health teams (CMHTs), and on to inpatient psychiatric facilities where required (Thornicroft et al., 2011). Various auxiliary services such as Home Treatment Teams (HTT) can minimise need for step-up or aid step-down on this pathway, for example, by providing intense support to people experiencing crisis thus avoiding admission to hospital (Rhodes & Giles, 2014). A return to primary care is the

planned service trajectory where possible on this pathway; largely driven in recent years by increasing financial pressures, and to some degree by the misinterpretation of the "recovery model", to mean reduction in "dependence" on secondary care (Lester & Gask, 2006).

There are economic and social advantages for delivering mental health services through primary care (Reilly et al., 2012). Physical health outcomes for people with mental illness improve in primary care, outcomes for common mental health problems (e.g. anxiety, depression) are equivalent to those in specialist services and people with mental health problems prefer receiving care from their GPs (Lester et al., 2005; Lester & Gask, 2006). However, we are not aware of any studies looking at mental health outcomes for people with SMI.

CMHTs in south London have adopted an "easy-in/easy-out" approach to facilitate movement between primary and secondary care. Three of the authors (PR, RH, NB) who work on inpatient wards, have observed a number of previously stable discharged patients returning to the service severely unwell. We therefore sought to test whether

Work carried out at: South London and Maudsley NHS Foundation Trust Correspondence: Dr Parashar Ramanuj, Scutari Clinic, Adamson Centre, St Thomas' Hospital, Westminster Bridge Road, London SE1 7EH, UK. Tel: +44(0)2071885412. Fax: +44(0)2071885415. E-mail: p.ramanuj@doctors.org.uk

discharge to primary care is associated with subsequently higher acute mental health service use (defined as HTT input or psychiatric admission) in comparison to patients remaining within secondary care. For ease of understanding, we use the term "acute care" for acute mental health service use throughout the rest of the article.

#### Methods

We conducted the study in October 2013 using a retrospective cohort design.

#### **Patients**

The study population comprised participants over the age of 18 years who had received care for at least one year from a general adult CMHT in Lambeth, an ethnically diverse area of South London with significant levels of social deprivation and one of the highest rates of psychotic illness in England (Cooper et al., 2008). Participants were all those discharged or transferred from the team between January 2006 and October 2011.

The criterion for discharge was clinical, requiring the patient to have maintained sufficient stability and engagement with treatment for discharge to primary care to be considered feasible. Discharge decisions were made through multidisciplinary team discussion involving a consultant psychiatrist. No patients on clozapine were discharged as there was no arrangement in place with primary care to prescribe it.

The comparison group comprised of the patients remaining with secondary care but transferred to another CMHT within the local area during the study period due to changing address or wider service reconfiguration. This was to provide control for any effect of the disruption in treatment relationships associated with discharge, rather than the step-down to primary care itself. Patients on clozapine, who could not be discharged, were excluded.

#### **Procedures**

We analysed the computerised clinical records of all the participants in the discharged and transferred cohorts. We collected background data on all the participants including: age; gender; ethnicity; diagnosis by ICD-10 category; approximate duration under secondary care; duration of inpatient and HTT input in the two years prior to discharge or transfer; medication category and Health of the Nation Outcome Scale (HoNOS) rating.

We calculated the proportion of patients in the discharged group that were referred and accepted back by local specialist mental health services and the time taken to re-referral. Rereferrals could be accepted by a CMHT, HTT or psychiatric ward. For patients that were discharged and re-referred multiple times during the study period only the first episode was considered. In both comparison groups, individuals were considered to be in "crisis" if they had contact with Accident and Emergency Services, the police, Home Treatment Team (HTT) or inpatient psychiatric services.

We recorded the duration of acute care in the two years after discharge or transfer for both cohorts. This was calculated as the total number of inpatient bed days and the number of days spent receiving care from the HTT. We compared the receipt and duration of acute care in the two years after discharge or transfer for the two cohorts and the time taken for first input by acute services (inpatient or HTT). We also compared socio-clinical factors between those re-referred and those not re-referred.

#### Statistical analyses

We carried out data analysis using Stata v12.1 (StataCorp, College Station, Texas). We compared the socio-demographic characteristics, HoNOS ratings and acute care prior to transition of care for discharged patients versus transferred patients using chi-squared and Mann–Whitney U tests as appropriate. We used survival curves and the log rank test to compare the time to first acute care following transition of care between the two cohorts.

We carried out multivariate analysis using logistic and linear regression to compare respectively the receipt and duration of acute care between the discharged and transferred groups, testing for interactions between independent variables. We used multiple logistic regression to calculate the odds of re-referral for the background socio-clinical factors outlined above.

#### **Results**

During the study period, 98 patients were discharged to primary care (discharged group). In the same time period, 110 patients were transferred to a local general adult CMHT, of whom 18 were on clozapine treatment and so excluded. Thus 92 patients constituted our transferred comparison group.

As would be expected, the discharged cohort was better functioning than the transferred cohort with lower HoNOS rating; had spent less time under the CMHT, and had less acute care in the two years previously compared to the transferred group (Table 1). A greater proportion of those discharged were medication-free at discharge, and a lower proportion of those discharged were on depot medication. The two groups were otherwise similar in terms of diagnosis and ethnic background.

#### Acute care comparisons

Of those discharged, 57 (58.2%) were re-referred to local specialist mental health services within two years, of whom 35 (35.7% of the total discharged, 60.3% of those re-referred) were in crisis. The median length of time to re-referral was 39.0 weeks (IQR: 22.0–85.0 weeks).

There was no statistically significant difference between the two cohorts after discharge or transfer, either in total acute care (mean: 27.9 days/patient vs. 31.7 days/patient respectively), or the breakdown by HTT or inpatient input (Figure 1). There was however, a highly significant reduction in acute care for the transferred group in the two years after transfer compared to the two years before (mean: 42.2 days/patient vs. 31.7 days/patient, p < 0.01). This decrease was accounted for by a reduction in HTT input (9.8 days/patient vs. 5.2 days/patient, p = 0.03) rather than inpatient days (which was non-significant).

210 P. P. Ramanuj et al.

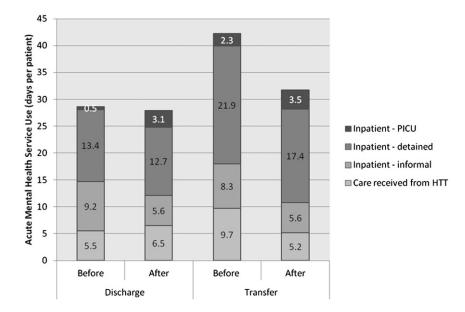
J Ment Health, 2015; 24(4): 208–213

Table 1. Demographic and clinical details of those discharged to primary care or transferred to local CMHTs.

Variable	Discharged to primary care $(N=98)$	Transferred to local CMHT $(N=92)$	p
Median age (IQR), years	42.5 (36.0–58.0)	45.0 (37.0–53.0)	0.79
Male, $N$ (%)	47 (48.0)	55 (59.8	0.10
Ethnicity, N (%)			
White British	20 (20.4)	20 (21.7)	
African-Caribbean/Black British	53 (54.1)	55 (59.8)	0.43
Other ethnic minority <sup>a</sup>	25 (25.5)	17 (18.5)	0.24
ICD 10 Category of mental disorder, N (%)			
Schizophrenia-spectrum psychosis	59 (60.2)	63 (68.5)	0.23
Bipolar affective disorder	20 (20.4)	16 (17.4)	0.60
Others <sup>b</sup>	25 (25.5)	21 (22.3)	0.67
Time spent under CMHT prior to transition in months (IQR)	74.5 (48.0–113.0)	107.5 (69.0–142.0)	< 0.01
Medication at point of transition, $N(\%)$	,	· · · · · · · · · · · · · · · · · · ·	
None	12 (12.2)	1 (1.1)	< 0.01
Oral	73 (74.5)	63 (68.5)	0.36
Depot	13 (13.3)	28 (30.4)	< 0.01
Median HoNOS Score (IQR)	6 (2–9)	8 (5–12)	< 0.01
Acute mental health service use in the two years prior to transition of care (days per patient)	29.7	42.2	0.03

CMHT = Community Mental Health Team; HoNOS = Health of the Nation Outcome Scale; HTT = Home Treatment Team; IQR = Inter-quartile Range. Chi squared (or Fisher's exact) test was used for comparisons between proportions and Mann—Whitney U for comparison between medians. Values shown in bold denote comparisons of statistical significance.

Figure 1 Acute mental health service use in the transferred and discharged groups in the two years before and after transition of care. Figures are mean averages (days per patient). Days spent admitted to an inpatient facility are further broken down into the mean number of days spent formally detained under the Mental Health Act and the mean number of days spent on a psychiatric intensive care unit (PICU).



Thirty-three patients (33.7%) required acute care within two years of discharge (all were admitted and 20 also required HTT intervention). Thirty-two patients (34.8%) received acute care two years after transfer to another CMHT (5 required HTT, 13 were admitted and 14 received both).

There was no statistically significant difference in the time to first acute care (Figure 2). Of those that received acute care, median time to first hospitalisation or HTT input was 33 weeks in the discharged group and 24 weeks in the transferred group.

#### Multivariate analyses

Neither the linear nor logistic regression model was significantly improved by the addition of interactions between independent variables. There was no statistically significant difference in the receipt or duration of acute care following discharge compared to transfer, independent of the other variables considered (Table 2).

An admission in the two years prior to transition of care (but not HTT input) was associated with increased odds of receiving subsequent acute care (by 0.02 for every day spent as an inpatient prior to discharge or transfer). It was also associated with increased duration of subsequent care (by about one extra day after transition of care for every two days spent as an inpatient previously). In addition, having a greater than average HoNOS score at discharge or transfer increased duration of subsequent acute care by 18.84 days, and being in the highest quartile for time spent under CMHT prior to discharge or transfer increased duration of subsequent acute

<sup>&</sup>lt;sup>a</sup>The most common other ethnic minorities were South Asian and Middle Eastern.

<sup>&</sup>lt;sup>b</sup>The most common other diagnoses were substance use disorder, major depressive disorder and anxiety disorder.

Figure 2. Survival Curve for time to acute mental health service use between the transferred and discharged cohorts. Time is for first HTT input or admission after transfer or discharge in weeks (median: 24 weeks vs. 33 weeks respectively). The difference was not statistically significant (p = 0.80).

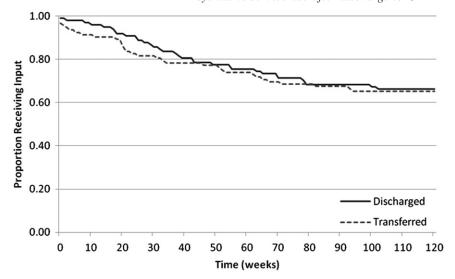


Table 2. Multivariate analysis for receipt and duration of acute care in the two years following transition of care.

	Receipt of acute mental health service use		Duration of acute mental health service use	
Variable	OR (95% CI)	p	Extra days per patient (95% CI)	p
Discharge (ref: transfer)	1.46 (0.62–3.45)	0.38	5.84 (12.41–24.08)	0.53
Sex (ref: female)	0.44 (0.19–1.02)	0.06	-8.88(-26.56-8.80)	0.32
Age group (ref: 20–29 years)				
30–39 years	1.15 (0.25–5.35)	0.86	19.88 (-11.30-51.05)	0.21
40–49 years	1.03 (0.53-4.72)	0.97	-0.32 (-30.17 - 29.53)	0.98
50–59 years	1.31 (0.24–7.08)	0.76	5.67 (-28.37-39.71)	0.74
60–69 years	0.57 (0.09–3.77)	0.56	5.29 (-32.18-42.76)	0.78
70 years+	0.47 (0.03-6.55)	0.57	22.39 (-30.12-74.90)	0.40
Ethnicity (ref: White British)				
African-Caribbean/Black British	1.03 (0.35–3.04)	0.95	8.55 (-13.04-30.13)	0.44
Others	1.30 (0.39-4.36)	0.67	6.31 (-18.34-30.96)	0.61
Higher than the median HoNOS score	1.57 (0.66–3.70)	0.30	18.84 (0.76-36.93)	0.04
at discharge (ref: below median HoNOS score) <sup>a</sup>				
ICD-10 category (ref: schizophrenia-spectrum psychosis)				
Bipolar affective disorder	1.70 (0.54–535)	0.37	-1.56 (-26.09 - 22.97)	0.90
Other	0.50 (0.13-1.88)	0.31	-17.57 (-41.81 - 6.67)	0.15
Multiple diagnoses	0.61 (0.13–2.93)	0.53	$-23.81 \ (-55.62 - 8.00)$	0.14
Medication (ref: none)				
Oral	1.51 (0.54–4.21)	0.44	8.70 (-30.53-47.93)	0.66
Depot	_ <sup>c</sup>		-6.05 (-50.30 - 38.24)	0.79
Time spent under CMHT prior to transition (ref: 10–60 months) <sup>t</sup>	)			
61–86 months	1.60 (048–5.31)	0.45	10.99 (-13.87-35.85)	0.38
87–125 months	0.90 (0.28–2.93)	0.86	6.13 (-18.53-30.79)	0.62
126–203 months	2.90 (0.86–9.77)	0.09	33.76 (8.89–58.62)	< 0.01
Acute care receipt in the two years before (ref: no receipt)	1.60 (0.52–4.89)	0.41	14.40 (-9.35-38.14)	0.23
Duration of acute care in the two years before				
Inpatient (per day received)	1.02 (1.01–1.03)	< 0.01	0.45 (0.22-0.68)	< 0.001
HTT input (per day received)	1.00 (0.97–1.02)	0.90	-0.07 (-0.63 - 0.48)	0.79

Acute mental health service use = acute mental health service use; CMHT = community mental health team; HoNOS = Health of the Nation Outcome Scale; IQR = interquartile range; OR = odds ratio. Odds ratio for acute mental health service use in the two years after discharge was adjusted for all other variables by logistic regression. The number of extra days acute mental health service use in the two years after transition of care was adjusted for all other variables by linear regression. A negative number indicates less days received than for the reference variable, and vice versa. Values shown in bold denote comparisons of statistical significance.

<sup>&</sup>lt;sup>a</sup>Health of the Nation Outcome Scale score was divided between those with lower than or equal to the median score of 7 (reference exposure) and those with higher than the median score.

<sup>&</sup>lt;sup>b</sup>Comparisons for duration of specialist care received prior to discharge or transfer were made by inter-quartile range, with the lowest range (10–60 months) used as the reference.

<sup>&</sup>lt;sup>c</sup>Omitted due to co-linearity.

212 P. P. Ramanuj et al.

J Ment Health, 2015; 24(4): 208–213

Table 3. Multivariate analysis for re-referral following discharge to primary care.

Variable	Re-referred OR (95% CI)	р
Sex (ref: female)	0.75 (0.25–2.22)	0.60
Age group (ref: 20–29 years)	0.73 (0.23 2.22)	0.00
30–39 years	0.42 (0.08–2.35)	0.32
40–49 years	1.26 (0.21–7.70)	0.80
50–59 years	3.00 (0.35–25.99)	0.32
60–69 years	0.69 (0.11–4.17)	0.69
Ethnicity (ref: White British)	0.05 (0.11 1.17)	0.07
African-Caribbean/Black British	1.64 (0.42–6.48)	0.48
Other	1.80 (0.39–8.25)	0.45
Higher than the median HoNOS score at discharge (ref: less than median HoNOS score) <sup>a</sup>	1.82 (0.53–6.28)	0.34
ICD-10 category (ref: schizophrenia-spectrum psychosis)	1.02 (0.55 0.20)	0.51
Bipolar affective disorder	0.99 (0.20–4.82)	0.99
Other	0.81 (0.21–3.15)	0.76
Multiple diagnoses	0.89 (0.41–1.94)	0.77
Medication (ref: none)	0.05 (0.11 1.5 1)	0.77
Oral	14.78 (2.35–93.03)	< 0.01
Depot	3.93 (0.45–34.55)	0.22
Time spent under CMHT prior to transition (ref: 14–48 months) <sup>b</sup>	21,22 (01.12 21.122)	0.22
49–74 months	1.12 (0.28–4.53)	0.87
75–112months	1.22 (0.29 = 5.14)	0.79
113–153 months	0.34 (0.07–1.76)	0.20
Acute care receipt in the two years before (ref: no receipt)	3.93 (1.44–14.55)	0.05

CMHT = community mental health team; HoNOS = Health of the Nation Outcome Scale; IQR = interquartile range; OR = odds ratio. Values shown in bold denote comparisons of statistical significance.

care by 33.76 days compared to those in the lowest quartile (Table 2).

#### Re-referral

Multivariate analysis suggested that receipt of acute care in the two years prior to discharge increased the odds of re-referral almost four-fold, and discharge on oral medication (as opposed to none) increased the odds of subsequent re-referral by 14.78 (Table 3).

#### Discussion

Our study supported the anecdotal finding that large numbers of discharged patients were referred back to mental health services within a short period of time; but contrary to our clinical observation, discharge was not associated with increased receipt or duration of, or reduced time to acute care compared to transferred patients.

Factors that appeared to be associated with subsequent acute care across both groups included: admission in the two years prior to service transition (whether discharge or transfer), higher clinical morbidity as assessed by higher than median HoNOS score; and a long duration of specialist input prior to discharge or transfer. Prior admission was also associated with longer duration of subsequent acute care. Admission or HTT input pre-discharge increased the odds of re-referral almost four-fold; although the results of the multivariate analyses should be interpreted with caution given the small sample size.

The more stratified measures – HoNOS scores and time spent under CMHT – were not useful predictors of acute care after discharge. Although these measures were found to be

statistically significant, the 95% confidence intervals were wide and no positive association with odds of re-referral were found. Therefore overall, our findings support systematic consideration of recent admission as a factor to support clinical discharge decision making, in conjunction with other factors such as patient preference.

For those transferred to another CMHT, acute care after transfer was reduced compared to before. It is possible that remaining in secondary care led to accrued gains in stability over time, so that over two years acute care matched that of the discharged cohort. Alternatively, as the reduction in acute care was principally accounted for by reduced HTT input rather than bed use, this reduction may simply reflect different HTT referral practices within the new team.

Perhaps the most striking finding here is that the majority of those discharged (58.2%) were referred back. Arguably a high rate of re-referral could be seen as an indicator of a functioning "easy-in/easy-out" system between primary and secondary care. The lack of difference in acute care two years after discharge or transfer could suggest that primary care is as suited to managing patients with severe mental illness as specialist services. However, it is telling that the majority of those referred back (60.3%) were in crisis at the time of re-referral, implying a difficulty either in early identification and prevention of relapse in primary care or having that need responded to in a timely fashion by secondary care, or both. The lack of a significant difference in outcomes between the cohorts may also suggest poorer service response for those discharged to primary care, despite the initially more favourable clinical picture in this group. Service use and HoNOS scores in the discharged group suggest less severe illness trajectories in the period preceding transition, further

<sup>&</sup>lt;sup>a</sup>Health of the Nation Outcome Scale score was divided between those with lower than or equal to the median score of 6 (reference exposure) and those with higher than the median score.

<sup>&</sup>lt;sup>b</sup>Comparisons for duration of specialist care received prior to discharge or transfer were made by inter-quartile range, with the lowest range (14–48 months) used as the reference.

supported by the observation that more patients were medication-free at discharge. If medication was required, discharged patients were less likely to be prescribed depot medication. It appears likely that discharged patients were more engaged with treatment or able to manage pharmacotherapy in oral form, implying better insight and functioning at a group level.

Taken together these findings suggest scope for improving collaboration between the primary and secondary care to better support the recovery of those with a history of SMI after discharge. Mental health outreach in primary care by psychiatric nurses, co-locating mental health and primary care services and other integrative/shared care models have begun to be explored (Gask & Khanna, 2011). In Lambeth, the "Living Well Collaborative" comprised of patients, mental health and primary care professionals, and other key stakeholders has been instigated to provide a synergistic approach to the commissioning and delivery of local services (England et al., 2013). Importantly, voluntary and charity organisations, which often play a key role in the management of patients in the community, are part of this collaborative.

#### Limitations

This is a retrospective study of local service provision and thus there may be factors specific to the particular setting which limit the generalisability of our findings. Our sample size was small and so our multivariate analyses were likely underpowered. We also had no objective measure of treatment concordance or reports from the participants and our outcome focus was purely secondary care service utilisation. We could not account for attrition from primary care in terms of death or movement out-of-area, which may have led to underestimation of subsequent acute care.

As entry to secondary service care is often determined through the prism of risk, we are likely to have not captured those remaining in primary care who may have relapsed with equivalent disease burden but without a high level of risk (or at least publicly evident and/or communicated risk). Specifically, this dataset allowed no consideration of subsequent health, quality of life, service costs within primary care or wider societal costs such as those related to employment status.

#### **Conclusions**

This is the first service evaluation of which we are aware to study secondary care utilisation following discharge of patients with SMI to primary care. We found only admission to hospital in the two years prior to discharge was both a clinically and statistically significant predictor of receipt and duration of subsequent acute care. Although we found acute care did not differ significantly between the groups of discharged patients and those remaining in secondary care, the majority of discharged patients were re-referred, and the majority of these were at the point of crisis. Given the better clinical status of the discharged group initially this suggests further exploration of care provision in primary care is required to better support and sustain the recovery of those discharged.

#### Acknowledgements

We would like to thank Prof <u>Paul McCrone</u> for aiding us in the design of this study and Dr Tony Davies for his valuable insights into the interpretation of our findings.

#### **Declaration of interest**

PR, RH, PG and NB are employed by the mental health organisation involved, but this organisation did not commission the study and was not involved in study design, data collection or analysis, or decision to submit. There are no other conflicts of interest.

#### References

Cooper C, Morgan C, Byrne M, et al. (2008). Perceptions of disadvantage, ethnicity and psychosis. Br J Psychiatry, 192, 185–90.

England E, Singer F, Perry E, Barber J. (2013). Guidance for Implementing Values-Based Commissioning. London: Joint Commissioning Panel for Mental Health.

Gask L, Khanna T. (2011). Ways of working at the interface between primary and specialist mental healthcare. Br J Psychiatry, 198, 3–5.

Lester HE, Tritter JQ, Sorohan H. (2005). Patients' and health professionals' views on primary care for people with serious mental illness: A focus group study. BMJ, 330, 1122–8.

Lester H, Gask L. (2006). Delivering medical care for patients with serious mental illness or promoting a collaborative model of recovery? Br J Psychiatry, 188, 401–2.

National Institute for Health and Care Excellence. (2011). Common mental health disorders: Identification and pathways to care [CG123]. London: National Institute for Health and Care Excellence.

Reilly S, Planner C, Hann M, et al. (2012). The role of primary care in service provision for people with severe mental illness in the United Kingdom. PLoS ONE, 7, e36468.Rhodes P, Giles SJ. (2014). "Risky Business": A critical analysis of the

Rhodes P, Giles SJ. (2014). "Risky Business": A critical analysis of the role of crisis resolution and home treatment teams. J Ment Health, 23, 130–4.

Thornicroft G, Tansella M, Drake RE. (2011). Organizing the range of community mental health services. In: Thornicroft G, Szmukler G, Mueser KT, Drake RE, ed. Oxford Textbook of Community Mental Health. Oxford: Oxford University Press, 107–17.