Prison Mental Health In-reach: The Effect of Open Referral Pathways

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In England and Wales, mental health in-reach teams manage high levels of mental disorder in prisons, but problems with reception screening and referral triage have been identified. As one potential solution, we examined the effect of an open referral pathway upon one in-reach team by evaluating its referrals and caseload across two time periods (in 2008 and 2011). There was a doubling of team referrals (from 101 to 203) with significantly improved identification of people with no mental health history. There was further evidence for a lowering of thresholds for referral and assessment, an approach that can be seen as helpful within a system that is known to under-identify mental health problems. Despite limitations, this evaluation offers some evidence for the effectiveness of open referral systems. It also raises questions about the potential effects of liaison and diversion services that are presently being piloted for national introduction.

Key words: custody; in-reach; mental health; prison; prisoner; reception referrals; screening.

Introduction

There is well-established international evidence for high levels of psychiatric morbidity amongst prisoners, with rates of severe mental illness (SMI) between two and four times community levels (Fazel & Danesh, 2002; Fazel & Seewald, 2012). In England and Wales, these high prevalence rates have been confirmed by a series of single-site studies (Birmingham, Mason, & Grubin, 1996; Brooke, Taylor, Gunn, & Maden, 1996; Gunn, Maden, & Swinton, 1991) and a comprehensive examination of the wider prison estate (Singleton, Gatward, & Meltzer, 1998). These high levels of morbidity indicate the need for appropriate services to assess and treat prisoners with mental health problems,

and in England and Wales such services are commissioned (and often provided) by the National Health Service (NHS). These service developments have largely been driven by policy, according to the international principle of equivalence (Srivastava, Forrester, Davies, & Nadkarni, 2013; Till, Forrester, & Exworthy, 2014), and as a consequence prison mental health in-reach teams have now been established for over a decade. Their main original remit was to manage prisoners with SMI using a service model that was closely based upon mental health teams operating in the community, and thereby also to improve collaboration between prison and community health services (Department of Health and HM Prison Service, 2001).

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However, within a relatively short time it became apparent that this remit was widening, driven by both the organisational context and high levels of need (Ricketts et al., 2007). As this widening was further extended by national policy that made a broader remit explicit, ‘mission creep’ was identified as affecting these services after they had been operating for only a handful of years (Steel et al., 2007).

Despite these initial problems, prison mental health in-reach services have generally been welcomed as a useful vehicle for managing prisoners presenting with mental health problems (Samele, Forrester, Urquia, & Hopkin, 2016), and greater levels of integration with primary care and forensic psychology services have been seen as beneficial (Forrester, MacLennan, Slade, Brown, & Exworthy, 2014). Yet although the introduction of these services has also coincided with improvements in national arrangements for prison health screening, many prisoners with SMI have remained unidentified during their time in prison (Birmingham, Gray, Mason, & Grubin, 2000; Senior et al., 2013). Although health screening upon reception into prison has been widely adopted as international best practice, there are inherent limitations with screening processes which may to some extent be immutable (Martin, Colman, Simpson, & McKenzie, 2013). Given these limitations, various local screening adaptations have been sought, including introducing mental health expertise into prison reception (e.g. Brown, Cullen, Kooyman, & Forrester, 2015) and using a second layer of screening to improve detection (e.g. Jarrett et al., 2012). To supplement these existing processes, mental health in-reach teams have also tended to be reliant upon referrals which they receive from other agencies (Birmingham et al., 2000).

In recognising the need to seek further improvements in the detection of mental health problems amongst prisoners, and the limitations of existing triage mechanisms (Brooker & Gojkovic, 2009), this project examines the effect of an open referral

pathway upon one prison mental health in-reach team by evaluating its referrals and caseload across two time periods (in 2008 and 2011). Given the developmental nature of prison mental health services, rapid changes in their remit over a relatively short number of years, and the relative paucity of literature documenting the ground-level experience of prison in-reach teams, it also adds to the available literature by documenting the development of one such team over time.

Method

Setting

This evaluation took place in a publicly-owned male category-B remand prison in South London. It has an operational capacity of approximately 800 prisoners, and it receives prisoners from several local magistrates’ and crown courts. At the time of the study there was a high population turnover, with over half of all arrivals being un-sentenced and another fifth serving short sentences of under 12 months.

Team

The mental health in-reach team was originally established in 2002, and was provided by an NHS team working in the prison on weekdays. The service functioned according to a community mental health team model, with input from nursing staff, psychiatrists and psychologists. An open referral system was adopted in 2008, and between 2008 and 2011 it was extended into the wider offender health pathways which served the prison (i.e. into local police and court liaison and diversion services), with clinicians providing services across multiple locations after 2009, rather than only in the prison. This meant that instead of taking referrals only from within primary care, the team now accepted them from a wider range of potential sources (including, for example, community mental health or social care services, healthcare services operating in local police stations and

courts, prison officers, legal representatives, families, and prisoners themselves).

Procedure

Referrals to the mental health in-reach team during an 18-week period in 2008 (Forrester et al., 2014) were compared with referrals during a 16-week period in 2011. Prison healthcare records (including reception screens, initial assessments and subsequent psychiatric and case management entries contained within the prison’s electronic health-care records) were also reviewed to collate information on a range of demographic, forensic and clinical variables.

Analysis

Descriptive statistics were used to describe demographic, clinical and forensic characteristics in the sample and Fischer’s exact tests were used to examine the differences between the referrals in 2008 and 2011. For several variables, categories were combined to achieve suitable numbers for analysis. Missing variables were present in less than 5% of cases and were not systematically related to outcome, so were excluded from analyses. SPSS v20 (IBC Corp, 2011) was used to conduct analyses. A multivariate logistic regression model was conducted using a stepwise variable selection procedure. Variables that had an association ($p < .2$) with acceptance onto the caseload in univariate tests were entered into the regression model and subsequently variables in the model that were shown to be associated ($p < .1$) with acceptance were retained. Variables were then re-entered and removed to ensure that confounding variables were included in the final analysis. Collinearity of the variables was below the accepted level.

Ethical Considerations

The clinical effectiveness group of the local NHS trust provided approval for this service evaluation.

Results

Comparison of all Referrals in 2008 and 2011

There were 101 referrals to the team during the 18 weeks in 2008 compared to 203 referrals during the 16 weeks in 2011. A total of 60 (59%) of the 101 referrals were assessed and accepted onto the caseload in 2008, and this number increased to 141 (69%) in 2011, as outlined in Table 1 below. The time taken from assessment to referral was similar across the samples, with the majority being seen within two days (2008, 67%; 2011, 68%) and only a small number waiting more than eight days.

The demographic characteristics of those referred to the team is largely similar in both samples. The age of those referred ranges from 18 to 63 years, and in both samples over half of referrals are aged between 21 and 35 years. Referrals from 2008 and 2011 do not differ significantly on variables related to marital status, ethnicity, employment or residency status, and the sample reflects the high level of deprivation in both the prison and the area of inner London which it serves, with high levels of unemployment (92%) in both samples.

With regard to forensic variables, the 2008 sample has a higher proportion of remand prisoners (73%) than the 2011 sample (53%), with a reverse trend shown for sentenced prisoners (2008, 19%; 2011, 33%). This difference is significant ($p < .001$). The 2011 sample has a higher proportion of prisoners charged with or sentenced for burglary (16%) compared to 2008 (5%), and conversely a

Table 1. Referral information.

	2008 sample		2011 sample	
	<i>n</i>	%	<i>n</i>	%
Referrals	101	100.00	203	100.00
Accepted to outreach				
No	41	40.59	62	30.54
Yes	60	59.41	141	69.46

Table 2. Clinical information.

	All referrals				Accepted referrals			
	2008 sample		2011 sample		2008 sample		2011 sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Primary diagnosis								
None given	12	11.88	63	31.03	0	0.00	24	21.98
Psychotic disorder	46	45.54	92	45.32	38	63.33	84	59.57
Affective disorder	15	14.85	22	10.84	9	15.00	16	11.35
ADHD	5	4.95	9	4.43	4	6.66	6	4.26
PTSD	4	3.96	3	1.47	2	3.33	2	1.42
Learning disability	4	3.96	1	0.49	3	5.00	1	0.71
Personality disorder	15	14.85	12	5.91	4	6.66	1	0.71
Substance misuse	0	0.00	2	0.98	0	0.00	0	0.00
Community care								
No previous mental health care	31	30.69	100	49.26	7	11.67	53	37.59
Previous mental health care	70	69.31	103	50.74	53	88.33	88	62.41
Inpatient admission								
No inpatient admission	34	33.66	132	65.02	5	8.33	85	60.28
Previous inpatient admission	67	66.34	71	34.98	55	91.67	56	39.72

Note: ADHD = attention deficit hyperactivity disorder; PTSD = post-traumatic stress disorder.

smaller proportion of less serious acquisitive offences (2008, 29%; 2011, 18%), but there are no such differences for other offences, and no significant differences for offence categories.

For clinical variables, there are several important differences (see Table 2). The 2011 sample has a higher proportion of referrals with no psychiatric disorder (31%) compared to 2008 (12%). The proportion with a psychotic disorder is almost identical across the samples, but the increase in those with no disorder in 2011 is accompanied by a reduction in those with all other recorded disorders. The differences are significant ($p = .001$). Further, the 2011 sample has a higher proportion of referrals with no previous contact with services (2008, 31%; 2011, 49%) and referrals with no previous admission to a psychiatric hospital (2008, 34%; 2011, 65%); both of these differences are significant ($p = .002$; $p < .001$).

Table 2 also shows the differences in clinical variables for those who were accepted

onto the team's caseload in 2008 and 2011. In 2011, significantly more prisoners with no diagnosed disorder were accepted onto the caseload (2008, 0%; 2011, 17%; $p = .001$), and as with the wider sample of all referrals, there are differences in the number of accepted prisoners with no previous contact with services (2008, 12%; 2011, 38%) and with no previous psychiatric admissions (2008, 8%; 2011, 60%). Both differences are significant ($p = .001$; $p < .001$).

The results of a multivariate logistic regression, conducted to determine which variables across both samples are associated with acceptance onto the in-reach team caseload, can be seen in Table 3. The variables which are significantly associated with acceptance onto the caseload are as follows: being referred in the 2011 sample ($p < .001$); psychotic disorder ($p < .001$); affective disorder ($p = .001$); attention deficit hyperactivity disorder (ADHD; $p = .005$); previous mental health care ($p < .025$); and inpatient admission ($p < .011$). Having a violent index

Table 3. Multivariate logistic regression^a for outcome of acceptance onto the caseload.

	Unadjusted odds ratio	Adjusted odds ratio	Standard error	<i>p</i> value	95% CI (adj. odds ratio)
Referral sample					
2008 sample	reference				
2011 sample	1.55	4.33	1.69	< .001*	2.01–9.32
Offence					
Acquisitive	reference				
Offences against property	2.51	2.30	1.65	.245	0.56–9.40
Sexual offence	1.01	0.92	0.64	.908	0.23–3.63
GBH/wounding	2.22	2.22	1.50	.241	0.59–8.40
Assault*	2.59	2.83	1.40	.036	1.07–7.46*
Homicide*	2.35	7.19	6.81	.037	1.13–45.96*
Licence recall	1.18	0.53	0.54	.534	0.74–3.86
Robbery	2.74	3.01	1.89	.080	0.88–10.32
Other	1.16	1.27	0.56	.582	0.54–3.02
Primary diagnosis^b					
No diagnosis	reference				
Psychotic disorder*	14.95	11.99	5.26	< .001	5.07–28.31*
Affective disorder*	4.01	5.01	2.47	.001	1.91–13.16*
ADHD*	5.21	8.09	6.06	.005	1.86–35.16*
PTSD	2.78	4.85	4.46	.086	0.80–29.42
Learning disability	8.33	14.13	19.25	.052	0.98–203.93
Personality disorder	1.67	1.63	0.90	.372	0.56–4.80
Community care					
No previous mental health care	reference				
Previous mental health care*	5.21	2.31	0.86	.025	1.11–4.80*
Inpatient admission					
No inpatient admission	reference				
Previous inpatient admission*	3.47	2.57	0.96	.011	1.24–5.36*

^aMultivariate logistic regression model shown was constructed using a stepwise variable selection procedure retaining all variables that had an association with acceptance to the caseload ($p < .2$) and subsequently removing from the model variables that were not significant ($p < .5$) and did not have a confounding effect; ^bSubstance misuse excluded due to lack of cases and learning disability included but with limited cases; *Significant at the $p < .05$ level. ADHD = attention deficit hyperactivity disorder; CI = confidence interval; GBH = grievous bodily harm; PTSD = post-traumatic stress disorder.

offence of assault ($p = .036$) or homicide ($p = .037$) is also significantly associated, but should be seen within the context of a small number of cases and large confidence intervals.

Discussion

As prison mental health in-reach teams have developed across England and Wales over the last 15 years, variations in service

delivery have become apparent through national surveys (e.g. Brooker & Gojkovic, 2009; Forrester et al., 2013), but the literature describing the ground-level functioning of these services is limited (e.g. Forrester, Chiu, Dove, & Parrott, 2010; Forrester et al., 2014; Hales, Somers, Reeves, & Bartlett, 2015). Over this period, while teams have undergone rapid changes in their remit, problems with screening and triage systems have also been

identified (Brooker & Gojkovic, 2009). Further, although working across criminal justice areas has been recommended as best practice by national policy (Bradley, 2009), most teams have historically played no role in wider criminal justice liaison and diversion services (Brooker & Gojkovic, 2009).

Within this national context, this service experienced a doubling of its referral rate after an open referral system was introduced and then extended across wider criminal justice clinical pathways (with clinicians working across multiple locations after 2009, including the prison and the main local magistrates' court). This doubling of referral rates between 2008 and 2011, during a period when there were no identified changes to the prison, its population, or its feeder criminal justice system pathways, strongly suggests a causative role for the extension of the open referral system across clinical pathways leading into, and within, the prison. Further, the fact that the 2008 sample contained a higher proportion of remand (pre-trial) prisoners appears to confirm a subsequent widening of the net to include greater numbers of prisoners who were convicted, un-sentenced, or sentenced, consistent with the general intention of lowering thresholds. The incorporation of significantly greater numbers with no identified psychiatric disorder in the 2011 sample is more difficult to explain, but it does also suggest a general lowering of thresholds for both referral and assessment. This appears to be consistent with the general principles of the open referral system and its pathways and can be seen as a helpful approach within a system which is known to under-identify mental health problems. The significantly improved identification of those with no history of contact with services, including hospital admission, appears as an unintended consequence which provides further support for the model.

This evaluation is limited due to the use of only one prison site, in one part of England and Wales (London), which limits the potential for these findings to be generalised. The work done is not experimental in nature for three main reasons: firstly, because the resources

needed to undertake such research were not available; secondly, because this service was rapidly developing and therefore subject to change (in fact, the very change that this study sought to evaluate); and thirdly, because the service operated an imperative, which was to provide clinical services for prisoners with mental illness. While multi-site experimental design is arguably the optimal choice for the examination of service-based approaches in health, it is also the case that any such design would have had its own limitations within a developing system whose prime function is the care and treatment of referred patients.

Despite the above limitations, this evaluation offers some evidence that the introduction of open referral systems within prisons, and their incorporation across offender health pathways, can lead to higher referral numbers, and thereby improved recognition of mental disorder. As such, they have the potential to bolster the reception screening inefficiencies which have been identified internationally. In a wider sense, this work also raises serious questions about the liaison and diversion services which are currently being piloted across England and Wales with a view to their mainstream introduction, following new investment in pilot schemes (NHS, 2015).

The local referral effects shown in this evaluation now require further examination across a range of services, so that their implications for mental health services in prisons and the community can be better understood. It is likely that these liaison and diversion services will identify many more people for referral than before, on a national level, in which case it will be necessary to ensure that the services put in place to meet this demand are sufficiently resourced.

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