

Long-stay patients with and without intellectual disability in forensic psychiatric settings: comparison of characteristics and needs

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Background

In recent years, concerns have been raised that too many patients stay for too long in forensic psychiatric services and that this is a particular problem in those with an intellectual disability.

Aims

To compare the characteristics, needs, and care pathways of long-stay patients with and without intellectual disability within forensic psychiatric hospital settings in England.

Method

File reviews and questionnaires were completed for all long-stay patients in high secure and a representative sample of those in medium secure settings in England. Between-group analyses comparing patients with and without intellectual disability are reported.

Results

Of the 401 long-stay patients, the intellectual disability and non-intellectual disability groups were strikingly similar on many sociodemographic, clinical and forensic variables. The intellectual disability group had significantly lower lengths of stay, fewer criminal sections, restriction orders and prison transfers, and higher levels of behavioural incidents and risk assessment scores.

Conclusions

In spite of similar offence histories and higher risk levels, those with intellectual disability appear to be diverted away from the criminal justice system and have shorter lengths of stay. This has implications about the applicability of the Transforming Care programme to this group.

Keywords

Learning disability; mentally disordered offenders; forensic mental health; forensic psychiatry; in-patient services; transforming care.

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Forensic psychiatric hospitals in England and elsewhere operate at the interface between law and psychiatry; assessing, treating and managing patients who have a mental disorder, and who have committed an often serious offence. There is currently no accepted standard for length of stay (LoS) in these units, with the result that concerns have been expressed that patients may stay for too long, in too high levels of security.¹ A research project investigating the characteristics and needs of patients identified as 'long stay' (for definition see the Method section) within high and medium secure forensic psychiatric services in the UK¹ reported that 23.5% of patients in high secure and 18.1% in medium secure settings were in that category (mean LoS of 14.5 years) with about one-fifth having been resident for over 20 years.

In the UK currently, there is considerable interest about the LoS of those with an intellectual disability (also known in the UK National Health Service (NHS) as individuals with learning disabilities) who are treated within hospitals, and future care models for this group are under intense scrutiny.^{2,3} They are a relatively underresearched, heterogeneous and complex subgroup,⁴ and although a number of single service studies have been published, few studies have examined the characteristics and needs of this group across representative samples, or compared them with those without an intellectual disability. The latter is important because of previous studies that reported that those with an intellectual disability within such services have higher rates of aggressive behaviour and higher scores on objective risk assessment tools.^{5,6} Therefore, this study aimed to: (a) elucidate the characteristics and needs of patients with intellectual disability, who have been identified as 'long stay' within high and medium

secure forensic psychiatric services, and (b) compare these with those who do not have a diagnosis of intellectual disability.

Method

Design

A full detail of the methodology is available in Völlm *et al.*¹ The study used a mixed-methods approach, including a cross-sectional survey (on 1 April 2013) of all patients in participating units to identify long-stay patients, followed by file reviews and consultant questionnaires for long-stay patients.

Participants

Patients within high and medium secure psychiatric services defined and identified as 'long stay' were included in the study. As there is currently no accepted standard for LoS in either high or medium secure care, piloting data and previous literature was used to develop a definition. Piloting data from one high secure care setting suggested that just over 15% of patients stayed for over 10 years. For medium secure care, literature suggests that between 10 and 20% stay for ≥ 5 years.¹ We therefore aimed to use a LoS cut-off point that would capture a similar proportion of patients. This decision was guided by the consideration that the population included should be large enough in size to provide meaningful conclusions for service developments (i.e. not so small that only a very limited number of patients would be included and not so large that a substantial proportion of patients

would be captured). On balance, a cut-off point capturing around 15–20% of the population seemed appropriate. The definition took into account the total time spent consecutively in levels of high/medium security, and categorised a long-stay patient as a patient who has spent:

- (a) ≥ 5 years in medium secure care, or
- (b) ≥ 10 years in high secure care, or
- (c) ≥ 15 years in continuous secure care in a combination of high and medium secure settings.

All three high secure units in England participated in the project. There were approximately 57 medium secure units in England at the time of the study. A stratified cluster sampling frame was adopted with 23 medium secure units, comprising 14 NHS and 9 independent units, drawn according to sector, geographical region, size and specialisation (for example patient groups), with oversampling of units specialising in particular patient groups, including women and patients with intellectual disability. This sample represents approximately 40% of all medium secure units in England. Participants were included in the intellectual disability group if they had a diagnostic code of F70–F79 according to ICD-10.⁷ In total, there were 401 long-stay patients, including 66 with intellectual disabilities (the intellectual disability group) and 335 without (non-intellectual disability group).

Procedure and data collection

The first stage of the project was identifying those who met the criteria of 'long stay', based on LoS data (from admission to current setting on census date) and basic patient characteristics (date of birth, gender, ethnicity, admission source, Mental Health Act section and type of current ward) were collected for all patients resident in included units. For those who did not meet criteria for 'long-stay' on the basis of their LoS in their current unit but who had been admitted from another high or medium secure hospital setting, additional enquiries were made to determine whether the patient fulfilled the study criteria for 'long-stay'. It should be noted that in England, admissions to forensic hospitals are usually the result of incidents of offending behaviour or abnormally aggressive or seriously irresponsible behaviour, as defined by the Mental Health Act 1983, amended 2007.⁸ The majority of patients are admitted under Part III of the Mental Health Act, which means being subject to a court order with or without restrictions from the Ministry of Justice. However, some patients within forensic services have not been processed through the criminal justice system. This can be because of the police, the crown prosecution service or other criminal justice agencies not taking the case through the courts, or dropping proceedings once they see that the person they are pursuing is already in hospital even if that is under Part II ('civil' sections). Furthermore, carers of those with intellectual disability can be less likely to involve the police when an offence is committed.⁹ These situations can result in an 'upwards referral' where patients are referred to services of increasing security, without going through the criminal justice system.⁸

The second stage involved the completion of detailed file reviews of all patients identified as long stay ($n = 401$) by nominated individuals employed by study sites, primarily those who already had access to this data as part of their routine roles. A data collection training protocol was provided, which included a detailed guide to data collection and two exercises to assess understanding of the inclusion criteria and the documentation of criminal history. Following completion of training, a pilot pro forma was completed, which was reviewed by the study team with feedback given. Only if this seemed satisfactory were a further five pro formas completed for review, and then full data collection began if sufficient quality of data collection was achieved. Data collectors were encouraged

to ask questions if they encountered any difficulties, and kept in regular contact with the research team, who provided supervisory input during this time. Study researchers comprehensively checked all submitted data and provided extensive support and guidance to data collectors at the study sites.

Measures

A detailed data collection pro forma was developed, which sought information on eligible patients' care pathways, sociodemographics, psychiatric history, offending history, intrainstitutional behaviour, risk measured by the Historical Clinical Risk Management-20 (HCR-20),¹⁰ and interventions. To describe patients' recent improvement or deterioration in risk, participants were categorised as either an 'improver', 'non-improver' or 'deteriorater' based on the difference between the sum of their total clinical and risk items on the HCR-20 scale from 2013 and their next most recent assessment.

Analysis

Data were analysed using Stata (version 13) and Statistical Product and Service Solutions (SPSS, version 21). For categorical data, comparisons between patients in these two settings were completed using cross-tabulation and χ^2 -tests. For continuous ('scale') data, comparisons were made using a non-parametric test (Mann-Whitney), because a number of variables deviated from an approximately normal distribution. Descriptive statistics for the whole sample, and comparing patients in the intellectual disability group and patients in the non-intellectual disability group are reported. The significance level for differences was set at $P < 0.05$. In studies that involve multiple testing, the likelihood of a type I error (i.e. concluding that a significant difference is present when it is not) increases with the number of tests involved, and an adjustment to this threshold is often considered appropriate.¹¹ However, it has been argued that the decision as to whether to correct or not should depend on the circumstances of the study.^{12,13} In this case the decision was made that such a correction would be inappropriate. This is justified because the current study is exploratory; and it was considered important to avoid a type II error (i.e. concluding that a significant difference is not present when in fact it is).

Funding and ethical approval

Funding for this study was provided by the Health Services and Delivery Research programme of the National Institute for Health Research (NIHR), reference: 11/1024/06. As the data were compiled by unit staff at the respective study sites, and transferred to the research team in a fully anonymised form, this aspect of the project was deemed to constitute service evaluation, as per confirmation by the research and development department of Nottinghamshire Healthcare NHS Trust, the sponsoring institution, and in accordance with guidelines;¹⁴ hence ethical approval was not required.

Results

Sociodemographic characteristics

There were no statistically significant differences between patients in the intellectual disability group and those in the non-intellectual disability group on any of the sociodemographic variables measured, with the whole sample being predominantly male (85.8%), and White (78.1%), followed by Black (11.2%), Mixed 5.5%, Asian (3.5%) and unspecified/other (1.7%). The intellectual disability group were slightly younger, at an average of 40 years, compared to 45 for the non-intellectual disability group, but this difference was not statistically significant.

Admission, Mental Health Act and LoS variables

The groups were compared on their LoS, using mean, median and categorical values; i.e. the proportion of patients with a LoS within the following categories; 5–10 years, >10–20 years, >20–30 years or >30 years. LoS data are reported in two ways, ‘continuous care’, which refers to the patient’s entire continuous LoS from first admission to a medium or high secure setting, therefore capturing placement moves between units, and ‘current unit’, which provides a measure of LoS relating only to the patient’s current placement.

Using the continuous care measure of LoS, the intellectual disability group had significantly lower LOSs than the non-intellectual disability group, 132.2 months compared with 162.5 months (median). There were no significant differences between the two groups within the LoS categories measured; however, the analysis highlighted that of patients with intellectual disability identified as ‘long stay’ 43.9% had stayed between 5 and 10 years, with a further 43.9% staying >10–20 years. A number of patients in the intellectual disability group ($n = 4$, 6.1%) stayed >20–30 years, and a further four (6.1%) had spent over 30 years in continuous care (Table 1).

There were no significant differences in LoS between the two groups using the current unit measure. There were considerable differences in LoS, when calculated relating to the entire duration of stay within continuous secure care for both groups, respectively 61 versus 132.2 months for the intellectual disability group (median), and 61.8 versus 162.5 for the non-intellectual disability group.

Analyses relating to the admission source of patients to continuous secure care revealed some differences between patients with intellectual disability and those without. Significantly fewer patients with intellectual disability were admitted to continuous secure care from prison (30.3% *v.* 61.2%) (Table 2). Patients with intellectual disability were more likely to be admitted from a low secure setting (25.8% *v.* 11.4%), or another psychiatry setting (19.7% *v.* 10.4%).

Considering the admission to the current unit, patients with intellectual disability were less likely to have been admitted from high secure settings (13.6% *v.* 26.3%), equally likely to have been admitted from other medium secure settings, and more likely to have been admitted from low secure settings (10.6% *v.* 3.9%),

Related to this, patients with intellectual disability were more likely than those without to have been admitted to continuous care (37.9% *v.* 16.5%) and the current unit (27.3% *v.* 14.6%) under a civil, i.e. non-forensic section. Patients with intellectual

disability were significantly less likely to be currently detained under a hospital order with restrictions, although they still formed a significant proportion of the intellectual disability long-stay population, at 50.8% compared with 66% in the comparison group.

Offending characteristics and sentencing outcomes

Table 3 details offending and sentencing histories in both groups. There were very few significant differences observed between groups. When categorised as either a violent, sexual or mixed offender, there were no significant differences. The majority of the intellectual disability group were categorised as a violent offender, at 56.1%, 10.6% were categorised as primarily a sexual offender and 18.2% as mixed. Within this sample, 7.6% were categorised as being a ‘non-offender’, and this rate was comparable with the non-intellectual disability group. The two groups were equally likely to have any convictions, at 92.4% of those with intellectual disability and 92.8% for those without, and both groups were approximately 20 years of age at their first conviction. On a measure of severity of offending, there were no significant differences.

Also analysed were patients’ index offences, a breakdown of violent and sexual index offences, and an overview of sentencing for these offences. Again, there was more similarity than difference. The two groups were convicted at similar ages, the early twenties, for the first violent or sexual offence. However, patients in the intellectual disability group were significantly more likely to have no index offence (30.3% *v.* 14%). Those with intellectual disability were significantly less likely to have an index offence against the person, or a property offence. Of those with a violent index offence, those with intellectual disability were less likely to have a conviction for manslaughter at 0% compared with 14% ($\chi^2 = -7.87$, $P = 0.005$), but more likely to have an offence of a severity lower than the threshold for actual bodily harm, at 46.8 versus 19.2%, ($\chi^2 = 16.92$, $P < 0.001$). There were no differences on any of the sexual index offence variables, or variables relating to sentencing options for the index offence.

Nonetheless, the intellectual disability group were less likely to have ever received a custodial sentence, at 43.1% as compared with 59.7%. Analysis of the number of offences by category highlighted an interesting lack of difference between the intellectual disability and non-intellectual disability groups. The two groups had

Table 1 Length of stay

	Intellectual disability				Non-intellectual disability				Statistics, Z (P)
	N	n	% ^a or median/mean (s.d.) ^b	Range ^b	N	n	% or median/mean (s.d.) ^b	Range ^b	
Length of stay (months) – continuous care									
Median (IQR)	66		132.2 (130.9)	13.7–505.3	335		162.5 (137.3)	60.2–651.0	-2.31 (0.021)
Mean (s.d.)	66		152.5 (98.4)		335		179.4 (105.4)		
Length of stay (categories) – continuous care									
5–10 years	66	29	43.9		335	115	34.3		n.s.
>10–20 years	66	29	43.9		335	149	44.5		n.s.
>20–30 years	66	4	6.1		335	49	14.6		n.s.
>30 years	66	4	6.1		335	22	6.6		n.s.
Length of stay (months) – current unit									
Median (IQR)	66		61.0 (87.2)	4.3–440.4	335		61.8 (78.8)	1.2–471.5	n.s.
Mean (s.d.)	66		80.3 (75.6)		335		77.7 (69.4)		
Length of stay (categories) – current unit									
<5 years	66	31	47.0		335	161	48.1		n.s.
5–10 years	66	19	28.8		335	104	31.0		n.s.
>10–20 years	66	15	22.7		335	61	18.2		n.s.
>20 years	66	1	1.5		335	9	2.7		n.s.

IQR: interquartile range; n.s., difference between groups not statistically significant at $P < 0.05$.

a. For categorical variables.

b. For continuous variables unless otherwise stated.

Table 2 Admission source and Mental Health Act (MHA) status

	Intellectual disability			Non-intellectual disability			Statistics, χ^2 (P)
	N	n	%	N	n	%	
Admission source to continuous care							
Prison	66	20	30.3	335	205	61.2	-21.37 (<0.001)
Low secure setting (NHS)	66	11	16.7	335	24	7.2	6.25 (0.012)
Low secure setting (independent)	66	6	9.1	335	14	4.2	n.s.
Other psychiatry setting	66	13	19.7	335	35	10.4	4.48 (0.034)
Community (police station)	66	13	19.7	335	51	15.2	n.s.
Other	66	3	4.5	335	6	1.8	5.18 (0.023)
Admission source to current unit							
Prison	66	11	16.7	335	68	20.3	n.s.
High secure setting	66	9	13.6	335	88	26.3	-4.80 (0.029)
Medium secure setting (NHS)	66	16	24.2	335	55	16.4	n.s.
Medium secure setting (independent)	66	18	27.3	335	99	29.6	n.s.
Low secure setting (NHS)	66	6	9.1	335	9	2.7	6.28 (0.012)
Low secure setting (independent)	66	1	1.5	335	4	1.2	n.s.
Other psychiatry setting	66	2	3.0	335	6	1.8	n.s.
Community (police station)	66	3	4.5	335	3	0.9	4.98 (0.026)
Other	66	0	0	335	3	0.9	n.s.
MHA section on admission to continuous care							
Section 3 v. others	66	25	37.9	334	55	16.5	15.79 (<0.001)
MHA section on admission to current unit							
Section 3 v. others	66	18	27.3	335	49	14.6	6.34 (0.012)
Current MHA section (as of 1 April 2013)							
Section 3 v. others	66	15	22.7	335	42	12.5	4.70 (0.030)
Current MHA categories							
Civil or quasi-civil ^a	65	29	44.6	335	81	24.2	11.40 (<0.001)
Hospital order with restrictions	65	33	50.8	335	221	66.0	-5.43 (0.020)
Prison transfers	65	3	4.6	335	33	9.9	n.s.

NHS, National Health Service; n.s., difference between groups not statistically significant at $P < 0.05$.

a. This category includes the civil sections 2 and 3 as well as criminal sections that nevertheless allow discharge without reference to the Ministry of Justice, such as section 37 without restrictions.

similar rates of offences against the person, sexual, property, theft and kindred, police/prison/court, public order, driving and other offences. However, the intellectual disability group had significantly less fraud and kindred, drug and gun or offensive weapon offences.

Risk behaviours and convictions within current unit and continuous care

A wide range of risk behaviours and convictions gained within secure services were examined, and are described in Table 4. The groups either had similar rates, or, where there were significant differences, the intellectual disability group had higher rates. The percentage of those with a history of serious suicide attempts was equally high across groups, as were successful absconsions, hostage taking, rooftop protests, room barricades and fire setting. Significantly more patients with intellectual disability had histories of absconscion attempts, were involved in serious incidents, such as serious assaults on staff or other patients and self-harm, many of which required use of seclusion facilities. The intellectual disability group was significantly more likely to have had incidents involving possessions of a weapon. Furthermore, those in the intellectual disability group were significantly more likely to have been convicted while residing in an institutional setting, at 45.5% compared with 23.3%.

The intellectual disability group had higher scores on subscales and total scores of the HCR-20 structured clinical judgement tool, reaching statistical significance on the total, history and clinical subscales. In the intellectual disability group, 33.3% were categorised as an 'improver', compared with 40.4% of the non-intellectual disability group, while 45.5% were categorised as a 'non-improver', in contrast with 29.5% of the non-intellectual disability group. In total, 21.2% of the intellectual disability group were classed as a 'deteriorator', compared with 30.1% of the non-intellectual disability group.

Current management and treatment

The two groups were compared on the diagnostic and treatment specification of the ward on which they were currently residing, and their medication regimen. Unsurprisingly, the majority of patients with intellectual disability were residing on an intellectual disability specific ward, at 68.2%, and were significantly more likely to be on intellectual disability wards than those without intellectual disability. However, this meant that 31.8% of patients with intellectual disability were cared for in non-intellectual disability specific wards, and these included 'mixed' at 16.7%, mental illness (4.5%), personality disorder (PD) or dangerous and severe personality disorder (DSPD) (4.5%), neuropsychiatry (4.5%) and comorbidity (1.5%).

There were few significant differences between the two groups regarding their medication/pharmacotherapy regimen, with both groups equally likely to be on various classes and combinations of psychotropic medication. This was with the exception of clozapine, with the intellectual disability group significantly less likely to be prescribed this medication, at 16.7% versus 37.7%.

Discussion

Strengths and limitations

Alexander *et al*⁴ noted that outcome studies from forensic psychiatric and intellectual disability services typically only focus on patients that have been successfully discharged, failing to describe or account for patients who are not discharged, and providing a falsely inflated view of service success. This study is the first to provide a comprehensive analysis of patients in forensic units who are difficult to discharge and hence become 'long stays'. Within that group, it compares those with an intellectual disability with those who do not. Its multicentre nature, the breadth of data

Table 3 Offending histories and sentencing outcomes

	Intellectual disability				Non-intellectual disability				Statistics, Z (P)
	N	n	% ^a or median/mean (s.d.) ^b	Range ^b	N	n	% ^a or median/mean (s.d.) ^b	Range ^b	
Category of offender									
Violent	66	37	56.1		335	195	58.2		n.s.
Sexual	66	7	10.6		335	16	4.8		n.s.
Mixed	66	12	18.2		335	76	22.7		n.s.
Other	66	5	7.6		335	24	7.2		n.s.
Non-offender	66	5	7.6		335	24	7.2		n.s.
Severity of offending									
Score 0	58	20	34.5		306	87	28.4		n.s.
Score 1	58	24	41.4		306	123	40.2		n.s.
Score 2	58	12	20.7		306	65	21.2		n.s.
Score 3	58	2	3.4		306	31	10.1		n.s.
Total number of offences	66			0–118	329			0–130	n.s.
Median (IQR)			10.00 (20.00)				9.00 (20.00)		
Mean (s.d.)			15.30 (19.84)				15.27 (18.63)		
Number of offences, mean (s.d.)									
Against the person	65		5.06 (10.77)	0–82	331		2.96 (3.34)	0–15	n.s.
Sex offences	66		0.94 (2.27)	0–13	332		0.91 (2.38)	0–20	n.s.
Property offences	65		3.26 (6.17)	0–33	330		2.77 (4.68)	0–33	n.s.
Theft and kindred offences	66		2.94 (5.78)	0–33	329		4.56 (8.91)	0–75	n.s.
Fraud and kindred offences	66		0.03 (0.17)	0–1	331		0.38 (1.96)	0–26	–2.32 (0.020)
Police/prison/court offences	66		1.15 (4.13)	0–26	332		0.98 (2.13)	0–18	n.s.
Drug offences	66		0.06 (0.30)	0–2	331		0.32 (1.09)	0–9	–2.23 (0.026)
Gun/offensive weapon offences	66		0.12 (0.33)	0–1	332		0.48 (1.13)	0–10	–2.63 (0.009)
Public order offences	66		0.76 (2.27)	0–16	330		0.64 (1.31)	0–11	n.s.
Vehicle/driving offences	66		0.24 (0.77)	0–4	331		0.85 (3.05)	0–29	n.s.
Other offences	66		0.56 (2.65)	0–18	332		0.48 (2.57)	0–27	n.s.
Any convictions	66	61	92.4		335	311	92.8		n.s.
Age at first conviction, mean (s.d.)	59		20.29 (8.45)	10–56	306		19.94 (8.12)	10–55	n.s.
Ever had a custodial sentence	65	28	43.1		325	194	59.7		–6.10 (0.014)
Age at first custodial sentence, mean (s.d.)	28		19.89 (3.59)	15–29	194		21.55 (5.12)	14–43	n.s.
Most severe sentence for any offence									
Life sentence	58	3	5.2		307	33	10.7		n.s.
Hospital order	58	43	74.1		307	233	75.9		n.s.
Prison >10 years	58	0	0		307	5	1.6		n.s.
Prison 6–9 years	58	3	5.2		307	7	2.3		n.s.
Prison 4–5 years	58	1	1.7		307	2	0.7		n.s.
Prison 1–3 years	58	2	3.4		307	9	2.9		n.s.
Prison <1 year	58	0	0		307	4	1.3		n.s.
Suspended sentence	58	0	0		307	1	0.3		n.s.
Community order	58	1	1.7		307	2	0.7		n.s.
Fine	58	0	0		307	1	0.3		n.s.
Conditional discharge	58	0	0		307	2	0.7		n.s.
Other sentence	58	5	8.6		307	8	2.6		n.s.
Any arson convictions	66	17	25.8		334	62	18.6		n.s.

IQR, interquartile range; n.s., difference between groups not statistically significant at $P < 0.05$.

a. For categorical variables.

b. For continuous variables unless otherwise stated.

collected and a data-collection strategy with steps to safeguard data integrity are particular strengths. Its drawbacks include a reliance on file-based information and a focus on only long-stay patients within high and medium secure services, rather than the whole pathway, which would have included low and forensic rehabilitation services too.

Main findings and comparison with findings from other studies

One of the most striking findings of the study was the remarkable similarity between patients with and without intellectual disability, on the forensic domains measured. Patients with intellectual disability had similar histories of offences and convictions, levels of offences within violent, sexual and arson categories, and levels of offence severity. Despite these similarities, a number of differences were observed between the two groups on the variables relating to

admission source, Mental Health Act status, sentencing outcomes and LoS. Patients with intellectual disability were less likely to have progressed through the 'forensic route', i.e. were less likely to be referred from prison, and were more likely to be referred 'upwards' from low secure care, or other psychiatric settings, a phenomena described by Alexander *et al* (2015).⁸ The intellectual disability group were more likely to be detained under a civil rather than a criminal/forensic section. Although the two groups were equally likely to have convictions, the intellectual disability group were less likely to have ever received a custodial sentence. Collectively, these results suggest that individuals with intellectual disability are more likely to be diverted from the criminal justice system than their peers without intellectual disability. This has been a recommended policy for this group,¹⁵ who are vulnerable to bullying and exploitation, and may not be able to access therapeutic programmes within prison or generic forensic psychiatric services.¹⁶

Table 4 Risk behaviours within current unit and continuous care

	Intellectual disability				Non-intellectual disability				χ^2	Z	P
	N	n	% ^a or median/ mean (s.d.) ^b	Range ^b	N	n	% ^a or median/ mean (s.d.) ^b	Range ^b			
History of self-harm or suicidal behaviour	66	51	77.3		335	205	61.2		6.18	0.013	
Suicide attempts											
History of serious suicide attempts	66	22	33.3		333	119	35.7			n.s.	
Serious suicide attempts during current continuous admission	66	10	15.1		333	47	14.1			n.s.	
Abscnson									4.40	0.036	
Attempted absconson, ever	66	32	48.5		333	116	34.8			n.s.	
Successful absconson, ever	66	28	42.4		333	131	39.3			n.s.	
Either in the last 5 years	39	10	25.6		169	43	25.4			n.s.	
Hostage taking											
Attempted hostage taking	66	2	3.0		335	15	4.5			n.s.	
Successful hostage taking	66	4	6.1		335	7	2.1			n.s.	
Either in the last 5 years	4	1	25.0		19	3	15.8			n.s.	
Other serious incidents, ever											
Attempted rooftop protest	66	1	1.5		334	6	1.8			n.s.	
Successful rooftop protest	66	1	1.5		334	5	1.5			n.s.	
Attempted room barricade	66	9	13.6		334	32	9.6			n.s.	
Successful room barricade	66	9	13.6		334	32	9.6			n.s.	
Attempted fire setting	66	17	25.8		334	62	18.6			n.s.	
Successful fire setting	66	18	27.3		334	81	24.3			n.s.	
Involved in a riot	65	0	0		334	5	1.5			n.s.	
Involved in the possession of a weapon	66	38	57.6		334	142	42.5		5.05	0.025	
Any serious incidents/seclusions											
in 2012–2013	66	43	65.2		335	113	33.7		22.90	<0.001	
in 2009–2013	66	51	77.3		331	163	49.2		17.40	<0.001	
Serious incidents/seclusions in the last 5 years											
Serious assault on staff	66	31	47.0		331	71	21.5		8.77	<0.001	
Serious physical assaults on others	66	28	42.4		331	82	24.8		8.56	0.003	
Serious deliberate self-harm	66	11	16.7		331	35	10.6		n.s.	n.s.	
Seclusion episodes in last 5 years	66	49	74.2		331	127	38.4		28.70	<0.001	
Any other incidents in the last 2 years	65	58	89.2		332	214	64.5		15.46	<0.001	
Number of other incidents in the last 2 years											
Median (IQR)	64		23.50 (53.0)	0–299	331		2.00 (11.0)	0–307 ^c	6.19	<0.001	
Mean (s.d.)	64		44.39 (60.80)		331		14.48 (34.99)				
HCR20 total score, mean (s.d.)											
Current (2013) score	29		29.31 (4.18)	22–37	173		26.63 (5.30)	10–38	2.48	0.013	
Current (2012) score	44		30.56 (4.38)	21–39	241		27.38 (5.39)	10–39	3.67	<0.001	
Change in HCR20 total score last 2 years											
‘Improver’	33	11	33.3		183	74	40.4			n.s.	
‘Non-improver’	33	15	45.5		183	54	29.5			n.s.	
‘Deteriorater’	33	7	21.2		183	55	30.1			n.s.	
HCR-20 history score, mean (s.d.)											
Current (2013) score	29		16.48 (2.58)	9–20	173		15.30 (3.05)	7–20	2.04	0.042	
Current (2012) score	44		16.70 (2.15)	12–20	241		15.23 (3.09)	6–20	2.87	0.004	
HCR-20 clinical score, mean (s.d.)											
Current (2013) score	29		6.35 (2.02)	2–10	173		5.51 (2.60)	0–10		n.s.	
Current (2012) score	44		7.07 (2.02)	3–10	241		6.09 (2.68)	0–19	2.29	0.022	
HCR-20 risk management score, mean (s.d.)											
Current (2013) score	29		6.48 (2.03)	3–10	173		5.82 (2.68)	0–16		n.s.	
Current (2012) score	44		6.80 (1.98)	3–10	241		6.05 (2.56)	0–14		n.s.	
Conviction for violent/sexual offence while in an institutional setting	66	30	45.5		335	78	23.3		13.77	<0.001	

IQR, interquartile range; n.s., difference between groups not statistically significant at $P < 0.05$.
 a. For categorical variables.
 b. For continuous variables unless otherwise stated.
 c. Excluded one outlier with 1259 incidents recorded.

Not only were the forensic histories of the two groups similar, the intellectual disability group exceeded their peers without intellectual disability on the frequency of serious incidents during their admission, and scores on the widely used structured clinical judgement tool, the HCR-20. These are not isolated findings. A number of research studies have reported increased rates of incidents among in-patients with intellectual disability.^{17–19} The reasons for this are unclear, however, one possible explanation is the high prevalence of communication²⁰ and social information processing deficits²¹ among people with intellectual disability, and

their link with behaviour. Furthermore, one study has suggested a relationship between higher levels of incidents and restrictive interventions among patients with the diagnosis of autism spectrum disorder, a commonly observed comorbidity in the forensic intellectual disability population.²² Similarly, a number of studies have reported elevated HCR-20 total and subscale scores among in-patients with intellectual disability, compared with those without.^{5,6,17,23} Boer *et al*²⁴ outlined the principal items where people with intellectual disability may be likely to score higher on the HCR-20 than those without, such as relationship

instability, employment problems and a lack of insight. However, regardless of the source of the problem relative to each item, each item is relevant to an accurate risk assessment of future violence. A lesser discussed consequence of such findings are the economic costs, which are likely to be higher in order to manage increased incidents and risk levels among patients with intellectual disability, because of higher level of observations and subsequent staffing requirements, and which should be taken into account when commissioning services.

This study used two measures of LoS, one relating to the patient's current admission only, and another which incorporated the entire duration of stay within continuous secure care, taking into account all placement moves within the whole admission. This has addressed observed methodological issues with previously published treatment outcome studies, many of which were single service, and report patients' LoS in relation to their stay within that service only.^{2,25} This is problematic, as unit moves are common within the long-stay group, with patients having an average of 1.43 unit changes in their pathway, with 31% having been in two settings, 23% in three settings and 18% in four or more settings within their continuous care pathway.¹ The difference between these two figures for both the intellectual disability and non-intellectual disability groups was considerable, at a median of 5.92 and 8.33 years, respectively. Therefore, the latter value appears more meaningful, if a comprehensive understanding of outcomes from forensic psychiatry is to be gained.

Using the continuous care measure, LoS was significantly lower (within the context of the long-stay nature of this population) among the intellectual disability group. It appears that in spite of higher risk levels, not only are those with intellectual disability diverted away from the forensic hospital system more often than those without intellectual disability, when they do end up as long-stay patients in forensic hospitals, they have shorter lengths of stay than the non-intellectual disability group. These results highlighted the somewhat paradoxical status of this forensic in-patient intellectual disability subgroup, who are simultaneously viewed as vulnerable within prison and not yet suitable for community services.

The forensic intellectual disability population and government policy

The service model previously accepted as best practice, diversion into specialist in-patient intellectual disability forensic services, has recently begun to fall out of favour in England. This is following the abuse scandal at Winterbourne View (in May 2011 the BBC Panorama programme *Undercover Care: The Abuse Exposed* was broadcast, which depicted scenes of significant abuse of people with intellectual disability and behavioural/mental health issues, in Winterbourne View, an in-patient service) and the resulting Transforming Care agenda²⁶ that committed the Department of Health to a rapid reduction in the number of people with intellectual disability within in-patient care,²⁷ particularly those who were perceived to have been detained for reasons of challenging behaviour. The UK government published 'Transforming Care: A National Response to Winterbourne View Hospital'²⁶ alongside a Concordat detailing the steps they and other key stakeholders would take. This broadly incorporated a shift in service provision, from in-patient to community-based services.

Although concerns have been raised that on occasion challenging behaviour has been 'forensified' in order to inappropriately detain people with intellectual disability within forensic settings, largely because of a lack of appropriate placements and expertise for this group,²⁸ it has been suggested that the forensic intellectual

disability population is fundamentally different to the target population of Transforming Care.²⁷ If the principles of the Transforming Care programme are inappropriately applied, with pressure being put on clinicians to discharge patients 'as quickly as possible', patients' rehabilitation can be hurried and/or truncated, patients can be discharged before they are ready or without the receiving community services being properly prepared to manage ongoing risks and there can be inappropriate admissions to acute mental health wards when a forensic admission would better suit the patient's needs.²⁷

The forensic intellectual disability population therefore represent a number of challenges to current government policy, and clarifications regarding their status is required. Is this population closer to 'intellectual disability', or to 'forensic'? The results of this study suggest they are more similar in characteristics and needs to the forensic population. Yet, most recognise that this group does not fit neatly into either bracket, as outlined by the Bradley report,¹⁵ (this highlighted the vulnerability and access issues faced by people with intellectual disability in generic forensic/prison settings, and recommended their diversion into intellectual disability specific hospital services) and for whom specialised secure/forensic services were developed in the first instance, to ensure people do not fall through the very large cracks between these two service domains. This has therefore created an untenable situation for the long-stay subgroup of the forensic intellectual disability population, and their multiple stakeholders. Voice is rarely given to the family members of patients treated in forensic intellectual disability services, yet relatives have also raised concerns regarding the lack of forensic community intellectual disability services, and the subsequent risks posed to themselves as victims.^{2,25} Although a number of such teams exist in certain parts of the UK,²⁹⁻³² their availability is patchy.

Possible alternative management options

A number of future management options have been suggested for this group in England. The first was to completely remove intellectual disability from the list of mental disorders in the Mental Health Act.⁸ If intellectual disability is no longer a mental disorder within the meaning of the Mental Health Act 1983, then this group no longer have the key to diversion services, and would be 'diverted' into the prison population. It is important that any attempt to reduce hospital-based forensic provision for people with intellectual disability does not increase the risk of more individuals being incarcerated in prison, an unintended, yet very real consequence, and one which is not politically or morally palatable.

A second option is discussed in the wider 'long-stay' study¹ that highlighted practice elsewhere in Europe – particularly the Netherlands, which has a national strategy for long-stay forensic care and have provided specific long-stay forensic units since 1999. Patients admitted to these facilities are those thought to have no realistic prospect of discharge after treatment of at least 6 years duration in two different treatment units. The focus in the long-stay units is not on treatment to reduce risks, but on improving quality of life, while managing entrenched risks. These models have demonstrated advantages in terms of both service user satisfaction and service costs. Differences in funding, service provision, governance and legal frameworks would make the implementation of these international service models in the UK context challenging, but a systematic exploration of this option could offer solutions. It is also worth exploring whether those who end up in those 'units' tend to have disproportionately larger numbers with intellectual disability or developmental disorders.

A third option is to improve training of community intellectual disability teams on issues of risk assessment and management, thus

supporting them to safely manage people with intellectual disability and offending behaviours, to reduce and minimise hospital admissions, and better facilitate discharge into the community,³² while noting that this would not negate the need for all in-patient beds. This option is less applicable to the 'long-stay' group, particularly in the absence of more intrusive supervision regimes in the community as an alternative to hospital treatment, by further strengthening of the provisions of community treatment orders. This step was considered when the Mental Health Act was last reviewed in England, but abandoned in the face of adverse comment.⁸ If the government is so inclined, this may well be worth revisiting for those people with intellectual disability and a mental disorder under the Mental Health Act, who are deemed to have the capacity to decide where they want to live, but need safeguards for the protection of others. That could then address the concerns over de facto detention with the community treatment order in the current legislative framework.⁸ This approach has the advantage of working within current practice as usual, requiring minimal changes to the Mental Health Act.

Future directions for research

Many patients with intellectual disability are treated in mainstream forensic mental health hospitals. As this study did not look at the level of psychiatric morbidity, this would be a priority for the future to determine what specific treatment approaches for the forensic intellectual disability population could be derived from the mainstream. Whichever service provision is adopted, it is clear that further research on the entire forensic intellectual disability cohort is urgently needed, to more fully understand the patient and service factors related to treatment outcomes. Preliminary work in this area has been completed^{2,25} and there is a need to continue it with information gathered from community, hospital and prison settings.

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