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Use of the HoNOS–LD in identifying domains of change

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Aims and method To analyse clinical outcome indicator data from the Health of the Nation Outcome Scales for People with Learning Disabilities (HoNOS–LD) in adults with intellectual disability admitted to mental health wards during a 19-month period; and to identify clinically relevant domains of change associated with in-patient admission.

Results Significant improvements were found in mental state, behaviour and social functioning. Improvements were also found in cognition and activities of daily living.

Clinical implications The HoNOS–LD is a useful tool for measuring clinical outcomes in several relevant domains and guiding in-patient treatment in learning disability psychiatry. It may also provide a currency for payment-by-results and influence the commissioning of learning disability services.

Declaration of interest None.

Over the past 25 years there has been a significant change in the provision of services for people with intellectual disabilities. Large institutions have either closed or become much smaller in the UK, USA and other countries.[1] Many people with intellectual disabilities and mental health needs and/or challenging behaviour now live in their family home or in a variety of supported living options and psychiatric services are increasingly provided in the community. However, the most recent White Paper in England for people with intellectual disabilities[2] continues to recognise that at times an in-patient admission for the purposes of assessment and treatment may be necessary

with a view to being discharged to their own homes once the symptoms have remitted.

The Health of the Nation Outcome Scales (HoNOS) were developed by the Royal College of Psychiatrists' Research Unit to measure the health and social functioning of people with severe mental illness, aiming to provide a means of recording progress towards the Health of the Nation target 'to improve significantly the health and social functioning of mentally ill people'.[3] Since their development in adults of working age they have been successfully adapted and validated for a number of psychiatric subspecialties, including psychiatry of old age (HoNOS–65+), forensic (HoNOS–Secure), children and adolescents (HoNOS–CA) and learning disabilities (HoNOS–LD).[4]

The HONOS–LD has previously been used to evaluate a model for in-patient care of people with intellectual disabilities.[5] We have subsequently collected HoNOS–LD data on all service users admitted for assessment and/or management of mental disorders as a clinical outcomes indicator and in line with current National Health Service (NHS) policy for service quality monitoring. We report the results of analyses carried out and the issues that arose for clinical practice.

Method

HoNOS–LD scoring

The HoNOS–LD instrument can be used to detect changes (either improvement or deterioration) across periods of 4 or more weeks, with a maximum score of 88 accrued over 18 items. A minimum of 4 weeks duration of in-patient stay is required because the HoNOS–LD score is based on the previous 4 weeks' parameters. The HoNOS–LD glossary provides details on the ratings for each item, where scores range from 0 to 4, indicating no problem to a severe problem.[6]

Inclusion and exclusion criteria

For a 19-month period, between July 2006 and February 2008, the HoNOS–LD was completed at admission and discharge for all in-patients with intellectual disabilities if the admission lasted more than 4 weeks. Eligible admissions lacking both an admission and discharge assessment were excluded. Assessments were performed only by clinicians attached to the specialist learning disabilities teams, who had received instruction by consultant trainers and with regular multidisciplinary team review of ratings to ensure reliability. High interrater reliability has been previously demonstrated.[4]

Data collection

Total HoNOS–LD scores were recorded, and also specific clusters of scoring items were identified within the tool. Seven specific 'clusters' were identified within the HoNOS–LD through consensus opinion between clinicians based on the nature of the items being assessed. These clusters were:

- behavioural problems, items 1–3
- cognition, items 4 and 5
- communication, items 6 and 7
- mental state, items 8–11
- physical problems, items 12 and 13
- activities of daily living, items 14–16
- social functioning, items 17 and 18.

These were used for a further data analysis to identify changes in these specific areas.

Additional demographic and clinical data not included in the HoNOS–LD were also collected such as diagnosis, duration of stay, and status under the Mental Health Act.

Data analysis

Data were analysed using Wilcoxon's signed rank test for non-parametric paired data with SPSS version 16 on Windows. This was both for change in overall HoNOS–LD score and change in score of individual clusters. Raw data were used for analysis of change in total HoNOS scores, and for analysis of change within clusters. For graphic representation of the seven clusters, an adjustment to the data was made in order to allow the proportion of the overall HoNOS score that each cluster represented, for the following reasons: first, some clusters contained more individual items than others as can be seen; and second, question 3 is subdivided into five different parts ('A–E') and therefore has a higher total maximum score than the other items. The formula used for the standardisation of scores between clusters is as follows:

$$(\text{cluster maximum score}/\text{HoNOS–LD maximum score}) \times \text{mean score for cluster}$$

The significance level was set at 0.01 for more conservative estimates.

Results

Demographic data

At the time of analysis, the data included details on 33 admissions for 24 service users. Their length of admission varied from 3 to 505 days, with a median of 92 days and an average duration of 80 days. Only two admissions were of service users not previously known to the service. Of the 33 admissions, 13 were for a period of less than 28 days and were excluded. Of the remainder, five did not have paired HoNOS–LD scores due to missing data and were also excluded. Data from 15 individuals with paired HoNOS–LD scores were included in the analyses. The mean age of individuals was 37 years (range 24–65). Demographic information for admissions meeting inclusion criteria is shown in Table 1.

Total HoNOS–LD scores

The mean of total HoNOS–LD scores was 28.8 on admission (range 10–44) and 11 on discharge (range 4–31). The mean change in score was −17.8 (range −6 to −28). For all data-sets there was a significant improvement in HoNOS–LD score at the time of discharge ($P<0.001$) (Table 2).

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Table 1 Demographic and clinical data for admissions meeting inclusion criteria

	Admissions *n* (%)
Gender	
Female	9 (60)
Male	6 (40)
Accommodation on admission	
Independent	5 (33.3)
Family home	5 (33.3)
Supported	3 (20)
Unrecorded	2 (13.3)
Degree of intellectual disability	
Mild	13 (86.7)
Moderate	2 (13.3)
Severe and profound	0 (0)
Diagnosis	
Psychotic disorders	6 (40)
Affective disorders	4 (26.7)
Other (substance misuse/organic/unclear)	5 (33.3)
Mental Health Act status during admission	
Informal	3 (20)
Detained under Section 2	2 (13.3)
Detained under Section 3	10 (66.7)

HoNOS–LD cluster scores

All 15 cases with recorded HoNOS–LD scores for admission and discharge contained item-specific scores and paired data were analysed using the cluster method with adjustment as described above (Table 2). All clusters showed improvements following admission. These are represented graphically in Fig. 1. Significant improvements were observed in behaviour, mental state and social functioning domains. Trends towards improvement were also seen in the activities of daily living and cognition domains.

Discussion

Following changes in the way in which individuals with intellectual disability are cared for by mental health services, there has been little evidence-based guidance to quantify the ways in which in-patient admission may be of benefit.[7] In this outcomes analysis we have been able to show initial findings that suggest that certain domains of function may respond well to in-patient admission. Although our data are based on a small sample of admissions, the similarity of trends in results between each data-set suggests that these were not chance findings. The service is representative of psychiatric morbidity in two inner London boroughs with a combined population of over 300 000.

The HoNOS–LD has been designed and validated as a suitable tool to monitor response to treatment in individuals with intellectual disability.[4] Its use as a quality-outcome indicator has been advocated elsewhere[8] and there is a growing body of published data where it has been used either in part[9] or in its entirety.[10–12] We present data that provide further support for its use to monitor outcomes during in-patient admissions. The HoNOS has also been extensively and successfully validated in other psychiatric subspecialties, including old age, children and adolescents, adults of working age, adults with brain injury and forensic settings.[13] Further, it has high interrater reliability and measures a broad range of clinical outcome indicators. Domains of clinical function were identified by consensus to allow broad areas of change to be identified and to enable the data to be analysed.

It has previously been demonstrated that although psychiatric morbidity is similar in both individuals in the community and those who are in-patients, significantly higher risks are associated with in-patient populations.[5] In our analysis a number of statistically significant outcomes have been clearly identified in several relevant domains, demonstrating that in-patient stay is associated with significant improvements in behaviour, mental state and social functioning. These factors are interdependent, and should be the focus of treatment for mental illness. Such improvements are likely to be a consequence of interventions that occur more intensively in an in-patient setting such as support by trained staff, occupational therapy, psychological therapies and medication. In addition, the HONOS–LD is able to clearly and effectively demonstrate change in these factors in response to treatment, and thus can be used to monitor the response and outcomes of people with intellectual disabilities admitted to mental health units.

Table 2 Health of the Nation Outcome Scales for People with Learning Disabilities (HoNOS–LD) scores data analysis

	Change in score, mean	Proportional score	*Z* (Wilcoxon)	*P*
Behaviour	−4.00	−1.28	−3.69	<0.001
Cognition	−1.13	−0.10	−2.47	0.013
Communication	−0.67	−0.06	−1.48	0.136
Mental state	−4.40	−0.80	−3.91	<0.001
Physical disability	−0.33	−0.03	−0.18	0.852
Activities of daily living	−2.40	−0.33	−2.55	0.011
Social functioning	−2.86	−0.26	−3.68	<0.001
Total HoNOS–LD score	−17.8	N/A	−4.22	<0.001

N/A, not applicable

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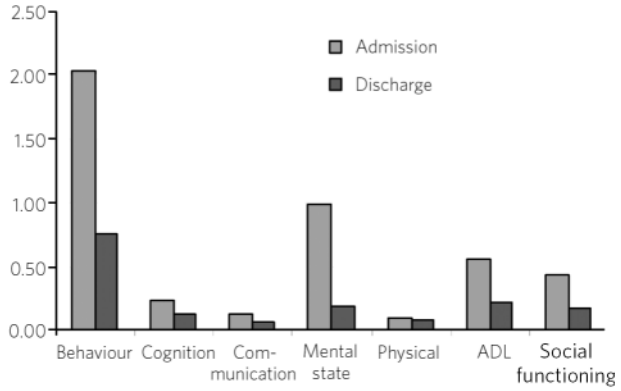

Fig 1 Proportional change in adjusted mean scores of the Health of the Nation Outcome Scales for People with Learning Disabilities clusters. ADL, activities of daily living.

We also saw trends towards improvement in activities of daily living and cognition. Improvements in activities of daily living may be attributable to a number of factors. First, prevailing mental state would have an impact on these activities and therefore improve concurrently. Second, the more intensive therapeutic interventions as described above during in-patient episodes may also explain improvements in this domain. The trend in the cognition domain may be the result of improvements in cognition secondary to treatment of the mental illness (e.g. reduction of depressive symptoms) or improvement in psychosis related to non-convulsive status epilepticus. However, the cognition domain in HoNOS–LD is a very blunt instrument and further investigation of this would be required through formal cognitive testing, which was beyond the scope of the present work.

The most recent Mansell Report emphasises the importance of commissioning appropriate services for people with intellectual disabilities who present with challenging behaviour.[14] Our results indicate that behavioural disturbance associated with mental disorders shows significant improvements following a period of in-patient treatment. Treatment in a hospital setting therefore appears to be an appropriate, cost-effective short-term intervention for adults with intellectual disabilities with challenging behaviour associated with acute mental disorders. The availability of specialist learning disability in-patient beds therefore need to be part of commissioning strategies for people with intellectual disabilities who present with challenging behaviour.

The systematic use of HoNOS–LD may be a solution to the potential problems of applying payment-by-results to the intellectual disabilities services through providing a potential currency. Arguably, the complexity of psychiatric presentation, interplay of physical and mental health and other comorbidities in people with intellectual disabilities can complicate the recording of information as well as compromising the accuracy of the data on each patient episode.[15] Therefore, a tool that can be useful in the assessment and identification of clinical change in people with intellectual disabilities both in community and in-patient settings is of great importance. Our results have indicated domains of 'dynamic' and 'static' function in relation to at least in-patient admission. The scores of particular clusters may be of use in guiding treatment during admissions as well as for treatment in the community. Other professionals may also be able to use the HoNOS–LD if trained and thus improve monitoring of the mental state as well as ensuring recognition and rating of mental health-related needs with increased precision.

We would like to emphasise its ease of use and its value in the identification of relevant areas of clinical function, and would encourage other teams working with service users with intellectual disabilities to use it.

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The recovery approach to care in psychiatric services: staff attitudes before and after training

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Aims and method To investigate the attitude of staff towards the recovery approach in forensic mental health services and the impact of training on staff knowledge and attitudes. A specially constructed 50-item recovery approach staff questionnaire, which focused on the core components of the recovery approach, was completed by 137 members of staff in in-patient forensic services in Lambeth, south London.

Results Staff were generally very positive about the implementation of the recovery approach in forensic services and those who had received training scored significantly higher on the questionnaire than non-trained staff.

Clinical implications The great majority of staff agree that the recovery approach to care does have a place in forensic services. This is important and needs to be built into the implementation of this approach in forensic services.

Declaration of interest None.

Recovery approaches to care promote a 'new clinical philosophy',[1] which encourages movement away from the traditional medical approach to treatment of mental illness and towards a more person-centred and humanitarian approach, viewing patients as 'experts by experience'.[2] The recovery approach is more personalised and subjective, and service users are encouraged to redefine their role, from passive suppliers of opinion towards active negotiators in the process of change.[3] Staff and service provider attitudes are noted to be a key determinant in the provision of recovery-oriented care.[4]

In order for recovery approaches to care to be implemented into clinical services, an attitude shift by service providers is required to understand the factors that influence recovery.[5] It is recognised that 'training clinicians is essential because recovery-focused care requires new attitudes and skills'.[6] To implement recovery-oriented practice within mental health services, staff training needs to incorporate the lived experience of service users.[7] Preliminary evidence from Australia indicates that recovery-training programmes can improve staff attitudes towards recovery and significantly increase staff knowledge regarding recovery principles.[8] Specifically, such training programmes can aid mental health professionals in understanding principles of recovery and collaboration and in supporting service user autonomy.

Within the UK, the South London and Maudsley National Health Service (NHS) Foundation Trust is actively promoting recovery approaches to care into practice,[9] as well as training for mental health professionals, including the forensic services. Evaluation of the success of one training programme within the Trust has been completed.[10] Slade and colleagues[10] aimed at piloting methods for evaluating the impact of recovery-training programmes for mental health service staff. They report that there is no recovery outcome measure with UK norms available and found that outcome data were not of high value. The measures that were available were 'not of high clinical relevance' and staff whom Slade and colleagues interviewed appeared to have difficulty relating the questionnaires to their work. Therefore, a measure with clinical relevance, focusing on the importance of personalised care, is needed in order to properly assess the effect of training on staff knowledge and attitudes and to measure the general attitudes of staff towards the recovery approach irrespective of whether or not they are trained in this 'new philosophy'.

The present study reports on the development and implementation of such a measure. We investigated the knowledge of staff working within in-patient forensic mental health services about recovery approaches to care and how training influenced their knowledge and attitudes. The main hypotheses being tested were that