TREATMENT
The Psycho-Social Rehabilitation of Patients with Alcohol-Related Brain Damage in the Community†

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Abstract — Aims: To describe the clinical presentation, course and psycho-social outcome of patients with alcohol-related brain damage (ARBD) referred from acute general hospital inpatient settings to a newly commissioned community team. Methods: A follow-up study of a consecutive series of 41 patients subjected to a developing, phased rehabilitation programme in community settings. Results: Patients were followed for an average of 25 months. Thirty-two patients were either abstinent or categorized as ‘controlled drinkers’ and were placed in appropriate community settings. Acute hospital admissions were reduced by 85%. The various domains of a neuropsychiatric assessment tool, the health of the nation outcome scale-acquired brain damage, improved with the exception of concomitant mental illness and self-directed harmful behaviour. Conclusions: A community team with experience in working with younger people with cognitive impairment can provide a service for people with ARBD. Such a service is not dependent on pre-designated specialist institutions but relies on person-centred care planning, close follow-up and collaborative work with a variety of community agencies. A structured rehabilitation programme provides a framework for intervention.

INTRODUCTION
Alcohol-related brain damage (ARBD) incorporates a wide range of neuropathological changes and related psycho-neurological syndromes including Wernicke’s Korsakoff syndrome, cerebella-cortical damage and changes in the cerebral hemispheres (Harper et al., 1998); in particular, the dorso-lateral frontal cortex (Matsumoto, 2009). The concept also includes the potential for recovery (Kopelman et al., 2009). Although the prevalence is difficult to establish, a meta-analysis of 39,704 post mortems from 11 centres in America and Europe found a prevalence of alcohol-related changes in the brain in ~1.5% of the general population and 30% of heavy drinkers (Cook et al., 1998). There is evidence that it is both under-diagnosed (Thomson et al., 2002; Agabio, 2004) and increasing (Smith and Flanagan, 2000). The importance of this is represented in the NICE guidelines in which routine cognitive screening of people presenting to alcohol treatment services is recommended (NICE, 2010). The lack of expertise and related services is reflected in the findings of a commissioned CSIP and Alzheimer’s Society study of patients with Wernicke/Korsakoff syndrome in England and Wales (Boughy, 2007). The report highlights a lack of diagnostic expertise, general ignorance within psychiatric, medical and nursing staff, no evident pathways of care and being ‘passed from pillar to post’, clinical stigma and lack of resources.

From a clinical perspective, many patients present through acute hospital settings or crisis in the community (Smith and Hillman, 1999; Elleswe, 2000) with acute confusional states often associated with withdrawal, delirium tremens, encephalopathy and delirium associated with unstable physical illnesses. The presentation is frequently complicated by head trauma (Weinstein and Martin, 1995) and cerebro-vascular disease (Woodburn and Johnstone, 1999). This is illustrated by a recent case study (Gupta, 2009) of a patient presenting with delirium tremens and evidence of ischaemic lesions that went on to complete recovery. The 30 days of hospital care before discharge is consistent with the findings of Popoola et al. (2008) who reviewed 44 ARBD patients admitted into acute hospital care over a 6-month period. The average length of stay in the hospital was 84.0 ± 72.3 days and mean lost bed days was 15.9 ± 36.6. ARBD is also associated with increased likelihood of early re-admission and increased mortality (Price et al., 1988).

The aim of this paper is to provide a pragmatic characterization of the presentation, clinical course and psychosocial outcome of patients presenting with ARBD and related complications in the context of a newly commissioned service. The service has developed a therapeutic paradigm, drawing on evidence from research and clinical experience in acquired brain damage rehabilitation and the rehabilitation of patients with ARBD.

METHODS
The service is a tertiary service, accepting referrals from a district general hospital and secondary psychiatric services, serving a population of ~300,000 and designed to cater for patients with severe ARBD. The service is embedded within a specialist team serving patients with early onset dementia and enhanced through the appointment of an Approved Mental Health Practitioner, a full time community nurse and nurse auxiliary. The team has been managing some patients with ARBD for some years and was formally commissioned ~2 years ago with the mandate to enhance independence of patients with ARBD and reduce acute hospital re-admissions. The service is commissioned to cater for patients under the age of 65.

Patient selection
A simple screening instrument was developed to enable the identification of patients at high risk of presenting with ARBD in ward settings. We adapted Oslin’s diagnostic

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criteria (Oslin and Carey, 2003) in the context of a preliminary review of 19 patients diagnosed as suffering from ARBD, referred from acute medical wards. This generated the following criteria to be used by non-trained generic nurses in the acute hospital setting.

Screening for referral to the ARBD service; (all three criteria should be positive)

1. Probable history of heavy, long-standing alcohol drinking: 35 units or more a week for at least 5 years.

2. Confusion, memory problems, doubt about capacity and concerns about risk on discharge, after withdrawal/physical stabilization.

3. Three or more admissions into hospital and/or accident and emergency in 1 year probably associated either directly (withdrawal, unconscious) or indirectly (trauma, organ disease, etc.) with alcohol ingestion or one or more delayed discharges from general hospital wards in the last 12 months. (a delayed discharge is defined as patients staying on the acute medical/surgical ward because of social and/or psychiatric problems).

The intervention

The therapeutic programme has evolved over a period of 2 years. It is characterized by five over-lapping therapeutic phases (Table 1). Throughout all phases abstinence is strongly recommended (Blansjaar et al., 1992). In Phase 1, NICE guidelines (NICE, 2010) provide the framework for the management of patients presenting with acute encephalopathy. This is followed by a period of relatively rapid cognitive improvement (Mann et al., 1999) and assessment during which the rehabilitative process can be initiated early (Fals-Stewart and Lucente, 1994). The environment should be calm and stable (Kopelman et al., 2009) including regularization of sleep, appropriate nutritional maintenance and mood stabilization (Malloy et al., 1990). The early development of therapeutic relationships (MacRae and Cox, 2003) and engagement of family and carers are important (Ylvisaker and Feeney, 1998).

The third phase (therapeutic rehabilitation) lasts up to 2–3 years (Sullivan and Pfefferbaum, 2005; Bartels et al., 2007) and is characterized by recovery of time-limited cognitive deficits. This is facilitated by ecologically relevant (Ylvisaker and Feeney, 1998) and holistic rehabilitation (Prigatano et al., 1996); not merely focusing on cognitive re habilitation. The main purpose is to enhance a sense of internal control (Ylvisaker and Feeney, 1998). This is facilitated through a milieu-based approach (Heinssen, 1996) in which increasing independence in relevant life skills (Giles, 1994) should be encouraged. The environment should be adaptable; accommodating the changing cognitive profile of the individual (Heinssen, 1996). This is encouraged through diaries, keeping, development of planning skills and retraining in activities of daily living with enhancement of problem-solving skills (ARBias, 2007), in the context of memory and orientation cuiing (Baddeley et al., 2002). The team, empowering the patient and enabling carers as co-therapists, supervises the programme. This phase should seamlessly run into the fourth phase (adaptive rehabilitation) of management in which the patient is facilitated in managing and adapting the environment so as to compensate for residual cognitive and functional deficits (Bates et al., 2002). The last phase (Department of Health, 2006) is an active interventional phase, derived from guidance in the long-term maintenance of alcohol control in patients presenting with alcohol misuse. Psychological therapies, social support; a structured programme of activities and specific alcohol management should be prioritized.

Assessments

On referral, patients received a full psychiatric and cognitive examination. The Addenbrook’s Cognitive Examination (ACE-R) (Mioshi et al., 2006) was prospectively conducted on 22 of the 41 patients, (having been introduced after the service was fully commissioned). The examination was conducted at an average of 8 months into rehabilitation, with the earliest being conducted at the 3 month assessment. Health of the nation outcome scale-acquired brain damage (Honos-ABI) assessments were carried out on 38 of the 41 patients within the first year of referral to the service (29% of these were undertaken through case-note review). A

<table>
<thead>
<tr>
<th>Phase</th>
<th>Characterization</th>
<th>Duration</th>
<th>On-going alcohol education and management, orientation and training and aids</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stabilization</td>
<td>Acute withdrawal, management of encephalopathy, thiamine supplementation, physical stabilization Usually carried out of acute medical wards</td>
<td>Variable: dependent on physical health</td>
<td></td>
</tr>
<tr>
<td>2. Psycho-social assessment</td>
<td>Evidence of fairly rapid improvement in cognitive and behavioural profile. Period of on-going assessment in therapeutic environment. Introduction of early routine, structure and support</td>
<td>May last up to 3 months. Duration may be increased when complicated by other organic and psychiatric conditions</td>
<td></td>
</tr>
<tr>
<td>3. Therapeutic rehabilitation</td>
<td>Period of more gradual improvement in cognitive and behavioural skills Progressive, active, personalized rehabilitation Skill acquisition, planning, problem solving</td>
<td>May last up to 3 years. Can be complicated by co-morbid physical and mental illnesses</td>
<td></td>
</tr>
<tr>
<td>4. Adaptive rehabilitation</td>
<td>Rate of cognitive and behavioural improvement has slowed or ceased; Social and physical environment is adapted to optimize independence</td>
<td>Duration will vary on personal circumstances and access to facilities</td>
<td></td>
</tr>
<tr>
<td>5. Social integration and relapse prevention</td>
<td>Building new social relationships, structured routines and alcohol relapse prevention</td>
<td>Long-term follow up required</td>
<td></td>
</tr>
</tbody>
</table>

The last phase (Department of Health, 2006) is an active interventional phase, derived from guidance in the long-term maintenance of alcohol control in patients presenting with alcohol misuse. Psychological therapies, social support; a structured programme of activities and specific alcohol management should be prioritized.

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second Honos-ABI was carried out on the patients in Phases 4/5 of the rehabilitation programme.

RESULTS

By late December 2010, 69 patients had been referred to the service. Of these, 28 patients were not accepted into the service for the following reasons: 10 patients were found not to have significant cognitive dysfunction prior to discharge from acute medical care and 2 patients had evidence of mild damage and were referred to the alcohol treatment services. Nine patients were assessed in the community but were actively misusing alcohol, precluding cognitive assessment. Two patients were aged 65 and over and were referred on to older persons’ mental health service and two patients were discharged from the acute hospital, prior to assessment by the team and reverted to heavy alcohol consumption. One was discharged out of the area, one had unstable schizophrenia and in one case uncontrolled drug abuse was the main presenting problem. The 41 consecutive patients accepted by the service were followed up for an average of 25 months (range: 131–1).

Demographics and clinical characteristics
Thirty males and 11 females had a mean age of 54; (range: 43–68) with males being approximately a decade older than females (male average age: 59.9, female average age: 50.1). The patient aged 68 was accepted prior to age criteria being arranged with commissioners. All patients presented with a history of post-withdrawal confusion, delirium tremens or encephalopathy. Five patients had previous documented histories of Wernicke’s encephalopathy, Korsakoff’s psychosis or ARBD in their medical notes. Four patients, warranting intubation, were admitted into acute medical care through the intensive medical care unit. All patients presented with alcohol-related liver disease. There was a high prevalence of significant co-morbid physical and psychiatric conditions (Table 2).

Therapeutic progress
Patients in psycho-social assessment (Phase 2)
The review was carried out at the end of 2010. Of the 16 patients in the assessment phase, 11 were placed in private nursing homes (including one that died from liver disease within 2 months). Of the 11, 2 suffered from a paranoid psychosis, characterized by delusional and hallucinatory experiences, 7 were prescribed antidepressant medication and 3 required major tranquilizers to facilitate the control of physical aggression. Two were subject to supervised community treatment orders (CTOs) and one patient was subject to guardianship (Section 7) of the mental Health Act 1983. The remaining five patients were supported in their own homes. Of these, one, with relatively mild cognitive impairment, relapsed into uncontrolled alcohol misuse and rejected further input. One patient continued at home with controlled drinking [defined as: ‘patient agreed supervised and restricted alcohol consumption’. Supervision usually involved carer (formal or informal) supervision, limiting the consumption to a predetermined number of units per week, agreed with the patient].

One patient relapsed into uncontrolled drinking and was admitted into a community alcohol withdrawal facility. Two remain alcohol-free.

Patients undergoing therapeutic rehabilitation (Phase 3)
Of the eight patients in this phase, five were discharged directly from acute medical care into community institutions. Another two patients were transferred from the medical wards into acute psychiatric in-patient care (one into the local semi-secure facility) due to significant and unpredictable violence related to cognitive impairment and psychoses, prior to being discharged to community institutions. Both are now subject to CTOs. One patient was discharged from acute medical care, directly home with support from the team. Four of the institutionalized patients are being rehabilitated into less dependent living environments; one planning to go home, and the other three being housed in the local catchment area with support. The remaining patient is managed at home with commissioned care package and team support and is slowly reducing the care package. One has been lost to follow-up on discharge from a community institution and is assumed to be engaging in uncontrolled drinking. All but the latter (n = 7) remain abstinent.

Patients in adaptive rehabilitation and relapse prevention (Phases 4 and 5)
Seventeen patients have reached the phases by which further cognitive improvement is unlikely and have been settled in an optimum environment which has been informed by residual cognitive deficits, comitant psychiatric illness and physical problems. Five received institutional care in community settings during their rehabilitation. Of these five, three remain in nursing homes. Of these three, one is in a

![Table 2. History and presentation of co-morbid conditions on referral](https://academic.oup.com/alcalc/article-pdf/47/3/304/145405)
generic nursing home for older people and is a controlled heroin addict maintained on methadone and in end-phase liver failure. One is on controlled drinking and has poorly controlled seizures and one suffers from bipolar affective disorder in addition to significant cognitive dysfunction. Two have been discharged from institutional care, were abstenent, but subsequently died (one from haematomasis and the other from pneumonia).

Of the 12 patients directly rehabilitated into their home environment, 8 have maintained abstinence, one of whom has subsequently died from a non-alcohol related event. Two patients relapsed into uncontrolled drinking requiring acute hospital re-admission for physical stabilization and management. One of these relapsed after transfer from the specialist service to the Older Peoples’ Service and has finally been admitted into an elderly mentally Ill nursing home and is now abstenent. Two patients have controlled drinking under supervision of carers and the team.

Of the total 41 patients, there have been 4 deaths, and 4 patients have relapsed into uncontrolled drinking and 1 patient was lost to follow-up. Of the 32 non-relapsed, surviving patients; all are on care plans, some of which are commissioned by joint health and/or social care agencies. Eighteen of these reside in community institutions, supported by the team. Fourteen patients are supported in their own homes with a variety of social support agencies that have been built up over the last few years through collaboration with the team (Fig. 1).

Standardized assessments
Within the first year of referral, the group average ACE-R score of the 22 patients assessed was 65.7 (range: 30–93; maximum score: 100) and the average Mini Mental State Examination score (incorporated within the ACE-R) was 23.3 (range: 11–30; maximum score: 30). Notably, the individual with a score of 30 on the Mini Mental State Examination had a score of 93 on the ACE-R. This individual had clearly defined difficulty in higher order reasoning and memory. The patient is currently held under guardianship of the mental health act.

Thirty-eight Honos-ABI examinations were carried out within the first year. Honos-ABI is a measure of neuropsychiatric sequelae following brain injury (Fleminger et al., 2005). Twenty-six assessments were undertaken within the first 3 months of referral. Ten of these were rated as experiencing severe cognitive problems. Thirteen were judged to be suffering from moderate cognitive problems; including disorientation, attentional problems, organizational difficulties and difficulty in thinking clearly. The remainder had either circumscribed cognitive deficits or milder impairment. Twenty-three experienced confabulations, hallucinations or delusions of which confabulations were the predominant presenting symptom. In 16, these were rated as either severe (with serious impact on patient or others) or moderate. Of the remaining 12 assessed in the first year, 2 had severe cognitive impairment, 4 patients had moderate cognitive impairment and the remainder had milder cognitive impairment characterized by disorientation, difficulty in prioritizing tasks, organizational issues and definite problems in learning new information. Five of these 12 experienced severe or moderate degrees of hallucinations, delusions or confabulation and another 5 experienced milder, less intrusive symptoms of a similar nature.

A repeat Honos-ABI was conducted on the 17 patients followed up for an average of 24.4 months, (range: 4–131 months) that are considered to have achieved optimum level of cognitive and social rehabilitation (therapeutic phases 4 and 5). Excessive alcohol ingestion or craving is not a significant problem for 13 of the patients; with one patient experiencing some over indulgence but within social norms, one patient with occasional loss of control but not presenting as a serious problem and two patients relapsed. From a cognitive perspective, one patient recovered completely and two patients have minor problems in prioritizing tasks but are able to learn new information. Eleven patients still have mild cognitive problems, with difficulty in learning new information, concentration, attention or completing complex tasks to the extent of interfering with everyday activities. The remaining three patients have moderate problems characterized by disorientation, attentional, organizational and significant memory problems. In terms of level of functioning safely in activities of daily living, two patients do not have any significant problems in self-care. Four experience minor problems, with evidence of some disorganization and decline from pre-morbid levels of functioning. Eight patients require prompting in basic self-care and have difficulty in more complex skills. Three patients require supervision and constant prompting in everyday activities and self-care. Six patients still have significant problems relating to confabulations, delusions or hallucinations and five patients suffer from on-going depression or other mental health problems.

Comparative Honos-ABI data (comparing assessments in the first year of referral with assessments carried out in Phases 4 and 5) are available for 12 of the 17 patients, including three patients that have subsequently died. Group average rating scores fell in all domains including ‘active disturbance of social behaviour’, ‘problem drinking and drug use’, ‘cognitive problems’, ‘physical illness and disability’, ‘experience of hallucinations, delusions and confabulation’, ‘problems with relationships’, ‘problems with activities of daily living’, ‘problems with living conditions and problems with activities’. No patients were rated as experiencing self-directed injury and there was an increase in group ratings of the experience of depression and other mental conditions.

Unplanned hospital admissions
Hospital records were scrutinized for admissions over the 5 years preceding referral to the service. The number of patients, days of acute medical or surgical inpatient care and duration of follow-up were used to compare relative admission rates prior to referral and during the follow-up period to the end of 2010. All admissions for at least one night were included, irrespective of cause.

Forty-one patients had 4418 days of admission during the 5 years preceding referral to the service (including the admission which initiated the referral). This generates a total of 205 patient-years during which the 41 patients (as a group average) were admitted for 21.5 days per patient-year. This in turn generates a usage of 0.53 acute medical/surgical inpatient bed days per patient each patient-year during the 5 years prior to referral.
After referral to the service, the 41 patients were followed up for 85.6 patient-years. They experienced 295 days of inpatient care in acute medical or surgical wards during this time frame. This amounts to an average of 3.4 days of admission for the whole group each patient-year. This in turn generates a usage of 0.08 acute medical/surgical inpatient days per patient each patient-year. This represents an 85% reduction in inpatient days per patient per year. This comparison excludes psychiatric admissions relating to two patients admitted for 267 days (post referral) for stabilization of co-morbid psychiatric conditions.

**DISCUSSION**

**Limitations of the study**

Considerable care must be taken in generalizing these findings. The sample is very small, consisting of a heterogeneous group of patients whose acute hospital admission is characterized by cognitive damage associated with long term, excessive alcohol ingestion. We have made no attempt to confine this study to patients with strictly defined Korsakoff psychoses and have included patients presenting with co-morbid physical and psychiatric, organic and functional disorders. In the absence of national surveys of such patients, it is impossible to say whether this group of patients is representative of those admitted to other acute hospital wards. Secondly, this is a descriptive study of an evolving, newly commissioned clinical service. Consequently, the data sets are incomplete, with only half of the patients receiving a formal (prospective) assessment with the ACE-R within the first year of presentation and 12 of the 38 Honos-ABI examinations were carried out through retrospective review of case notes. The five clinical ‘phases’ described have been informed by the natural progression of cognitive improvement as described in the literature (in the context of abstinence), and national guidelines in the management of Wernicke’s encephalopathy and the long-term management of alcohol misuse. Specific clinical and service interventions are informed by descriptive and investigative research undertaken in laboratory and clinical settings from a wide range of patient populations including people with Korsakoff’s syndrome, acquired brain injuries and descriptions of other developed services. Evidence of efficacy of specific, interventions and the programme in its entirety is not presented, as this would require an appropriately designed, controlled trial.

**Presentation of ARBD**

The concept of ARBD has been developed in order to accommodate a variety of inter-dependent conditions which contribute towards the presentation of cognitive and functional impairment in patients in which long-term, excessive alcohol ingestion is a primary common factor (Marshall et al., 2009). In adopting this pragmatic definition, the service is able to cater for the diversity of patients presenting on acute medical and surgical wards. This is reflected in a high prevalence of cerebro-vascular disease and traumatic brain damage (approximately one-third of the patients).
prevalence of physical co-morbidity and mortality is also high and is usually related to complications of long-term alcohol ingestion, nutritional deficiencies and trauma. Patients with ARBD are physically active and prone to high levels of fire hazard, agitation, disinhibition and delusional experiences (Ferran et al., 1996) when compared with younger patients suffering from dementia syndrome. Presentation is further complicated by a high prevalence of concurrent mental illness (approximately half of the patients). These encompass a wide range of syndromes including post-traumatic stress disorder, depression and psychotic conditions. Four patients were maintained on CTOs and one patient was held on guardianship. The considerable range of cognitive damage on (ACE-R) presentation is reflected in the functional assessment using the Honos-ABI. A quarter was rated as experiencing severe levels of impairment, and a third rated as suffering from moderate functional impairment in terms of cognitive function. However, even in cases in which there was circumscribed cognitive dysfunction, the severity was often of a handicapping nature. The presentation is further confounded by confabulatory experience in over half of the patients.

The clinical course and service provision

In this presentation, we have drawn on the literature and clinical experience to describe a model of potential improvement which offers a framework by which phased interventions can be delivered. The duration of each clinical ‘phase’ will vary and will be informed by concomitant psychosocial and physical problems. Likewise, transition between phases may be gradual or rapid. The important clinical issue is that patients are likely to improve over time and will need regular review and adjustment to care plans so as to optimize rehabilitation (MacRae and Cox, 2003). Care plans focusing on the individual’s needs, as opposed to being determined by access to specified community facilities are important. The advent of ‘personalized’ budgets and individually commissioned care packages goes some way to cater for this.

In the absence active rehabilitation, Blansjaar et al. (1992) found that patients did improve, especially if placed in smaller institutions or sheltered accommodation compared with those placed in larger nursing home institutions. As there is likely to be a degree of spontaneous recovery in the context of abstinence and appropriate nutrition, the role of a ‘specialised’ service should be questioned (Altermann et al., 1989; Godding et al., 1992). A number of controlled studies examining the effect of specific, targeted training in defined domains of cognitive function (Fals-Stewart and Lucente, 1994) indicate a positive effect. Evidence suggests that the benefit engendered through such interventions generalise to other cognitive domains (Fals-Stewart and Lucente, 1994). These findings, and accumulative clinical experience (ARBIAS, 2007) suggest that a more generic, social and behavioural rehabilitative approach is probably as effective as targeted cognitive interventions in promoting improvement (Bates et al., 2002). From a service delivery perspective, Price et al. (1988) compared outcomes of patients managed by specialist services with those managed by generic psychiatric services and found that specialist services performed better. In the absence of such a service, a specifically identified, specialized care co-ordinator is recommended (MacRae and Cox, 2003), so as to provide regular follow-up, reassessment and adjustment of care plans, working closely with other community teams in support.

Our pilot service was developed within a service managing younger patients with dementia. This has the advantage in that the team has a well-founded understanding in the assessment of cognitive damage, the management of difficult behaviour in cognitively impaired community patients and access to a network of community facilities willing to work with cognitively damaged patients of working age. However, one of the major problems we have encountered relates to community agencies having to adopt a rehabilitative approach as opposed to the long-term management of people with progressive dementias. Hence, without change in culture and expectation, dementia services do not provide a readily adaptable framework for the management of people with ARBD (MacRae and Cox, 2003). These issues may be mitigated by embedding the service within a neuro-rehabilitative service (Royal College of Physicians, 2001), as much of the rehabilitative programme draws of research conducted in patients with acquired brain damage (Bates et al., 2002).

The role of specialized institutions may be important, particularly in more severely impaired patients (Rychtarik et al., 2000). In our service, we have slowly built up expertise in nursing homes that otherwise specialize in younger people with dementia. This work has been facilitated through developing a ‘manual’ of intervention and guidance relating to supervised care, supplemented with formal and informal education and supervision of non-NHS nursing home and community staff.

Psychosocial and acute hospital care outcomes

In the mid- to late 1980s two studies were undertaken. Lennane (1986) followed up 104 patients for between 1 and 2 years (average 16.4 months), referred to a specialist in-patient rehabilitation unit. Therapy included the adoption of person-centred goals in the context of a ‘structured’ life and introduction of daily routines, an emphasis on self-care skills and group reality orientation. In the other study Price et al. (1988) followed up 37 patients discharged from non-specialist units with no specialist follow up. Follow up was for at least 12 months (average 14 months). In comparing these studies, price describes 53% of Lennane’s and 27% of his own subjects as being appropriately placed, suggesting that specialized service may be associated with better outcomes. In the Wirral sample of 41 patients, 4 patients have died (10%) and 1 patient has been lost to follow-up and 4 patients have relapsed into uncontrolled drinking and can be classified as ‘dysfunctional’ or ‘failed’. Thirty-two patients (78%), (excluding those that have relapsed or died) are either being actively rehabilitated or are settled into appropriate community settings. The intervening 30 years between the Australian studies and this study have witnessed many changes in both Australia and UK. Improvement in follow-up and outcome may reflect a more assertive management, incorporating co-ordinated care, care planning and use of both incapacity and mental health acts when appropriate.

The ‘before and after’ comparison of acute medical/surgical inpatient bed use is open to criticism in that a controlled intervention trial would have provided more reliable data.
However, a reduction of 85% in bed use is an important finding. It implies that the cost of community care may be mitigated by a reduction in acute secondary care costs. This is particularly pertinent in relationship to the 17 patients completing the rehabilitative programme. The majority receive follow up through the team and require relatively modest funding levels, most of which are provided through the local authority rather than through health care. Our analysis also indicates that rehabilitation is likely to improve most Honos-ABI domains in this group of patients.

Establishing a service

The purpose of our service is to enhance the quality of life, optimize independence and reduce utilization of acute hospital service provision for patients with ARBD. In the absence of national guidelines, commissioners and local mental health trusts should develop localized and relevant initiatives which may address the following issues:

- Local audits confirm that most patients with ARBD are unlikely to have been diagnosed or reported in acute hospital documentation. Case note audits attempting to ‘make a case of need’ are likely to fail. (The Wirral service serves a total population of 300,000 and received 30 referrals during 2010, generating an average of two confirmed ARBD patients a month).
- Service development is not dependent on the presence of local ‘specialized’ nursing home presence. Access to a wide variety of services is required, ranging from domestic care provision, sheltered home environments, supported living, residential care homes and nursing homes. Patients can be expected to move between these institutional settings as they rehabilitate. This programme may require individually commissioned care packages.
- In the absence of a specifically commissioned service, it recommended that a named individual is identified with the responsibility as a service co-ordinator and key worker for people with ARBD. This will facilitate the development of local expertise and present the opportunity for a planned ‘needs assessment’ of referred individuals which will inform future commissioning and resource development.
- All these patients should be considered as suffering from a serious mental illness, and most present with complex physical and psychosocial problems; hence, they should be supported by the full range of professions within a community mental health team.
- The service should be driven by an ethos of increasing independence and rehabilitating the individual; requiring advocacy, acute hospital in-reach and on-going, active and integrated psycho-social development.
- Premature long-term institutionalization should be avoided as patients are readily institutionalized with the risk of compounding their cognitive deficiencies and prematurely consigning them to expensive, inappropriate levels of dependency.
- Significant cognitive damage is likely to influence insight and risk taking behaviour; hence the utilization of the mental capacity and mental health acts should be considered.
- A close working relationship with the acute hospital liaison team, the local alcohol treatment and alcohol withdrawal services is critical.

CONCLUSION

This is the first study relating the psycho-social outcome of patients with ARBD in the UK. As in the other two Australian studies, it is small, naturalistic and uncontrolled, and the findings should be interpreted and generalized with caution. However, the implications of the findings are consistent with a growing body of literature in that patients with ARBD require on-going active engagement, assessment and management. Engagement by a team experienced in working with people with cognitive damage may be beneficial. Adopting a phased rehabilitation provides a clear structure through which potentially therapeutic interventions can be deployed. Our experiences have demonstrated that through the adoption of such an approach, a patient’s independence is optimized, there is a potential reduction in associated psycho-social morbidity and reduction in use of acute hospital inpatient care facilities. Both local expertise and facilities can be developed in the context of building an NHS-led service in close collaboration with a wide range of community services and are not dependent on pre-established specialized institutions.

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REFERENCES


