Journal of Substance Abuse Treatment 88 (2018) 1–8

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

Effectiveness of inpatient withdrawal and residential rehabilitation interventions for alcohol use disorder: A national observational, cohort study in England

Brian Eastwood [a,b], Amy Peacock [c,d], Tim Millar [e], Andrew Jones [f], Jonathan Knight [a], Patrick Horgan [a], Tim Lowden [a], Peter Willey [a], John Marsden [a,b,*]

[a] Alcohol, Drugs and Tobacco Division, Health Improvement, Public Health England, 2nd Floor, Skipton House, 80 London Road, London SE1 6LH, United Kingdom
[b] Addictions Department, Institute of Psychiatry, Psychology and Neuroscience, King's College London, Box 48, DeCrespigny Park, Denmark Hill, London SE5 8AF, United Kingdom
[c] National Drug and Alcohol Research Centre, University of New South Wales, Randwick, Sydney 2052, New South Wales, Australia
[d] School of Medicine (Psychology), University of Tasmania, Private Bag 30, Hobart 7001, Tasmania, Australia
[e] Centre for Mental Health and Safety, Division of Psychology and Mental Health, School of Health Sciences, Faculty of Biology, Medicine, and Health, 4th Floor, Block C, Ellen Wilkinson Building, The University of Manchester, Oxford Road, Manchester, M13 9PL, United Kingdom
[f] Centre for Epidemiology, Division of Psychology and Mental Health, School of Health Sciences, Faculty of Biology, Medicine, and Health, 4th Floor, Block C, Ellen Wilkinson Building, The University of Manchester, Oxford Road, Manchester M13 9PL, United Kingdom

ARTICLE INFO

Article history:
Received 2 July 2017
Received in revised form 29 November 2017
Accepted 6 February 2018
Available online xxxx

Keywords:
Alcohol
Inpatient
Residential
Treatment
Alcohol use disorder

ABSTRACT

Background: This was a national English observational cohort study to estimate the effectiveness of inpatient withdrawal (IW) and residential rehabilitation (RR) interventions for alcohol use disorder (AUD) using administrative data.
Methods: All adults commencing IW and/or RR intervention for AUD between April 1, 2014 and March 31, 2015 reported to the National Drug Treatment Monitoring System ($n = 3812$). The primary outcome was successful completion of treatment within 12 months of commencement, with no re-presentation (SCNR) in the subsequent six months, analysed by multi-level, mixed effects, multivariable logistic regression.
Results: The majority (70%, $n = 2682$) received IW in their index treatment journey; one-quarter (24%, $n = 915$) received RR; 6% ($n = 215$) received both. Of treatment leavers, 59% achieved the SCNR outcome (IW: 57%; RR: 64%; IW/RR: 57%). Positive outcome for IW was associated with older age, being employed, and receiving community-based treatment prior to and subsequent to IW. Patients with housing problems were less likely to achieving the outcome. Positive outcome for RR was associated with paid employment, self/family/peer referral, longer duration of RR treatment, and community-based treatment following discharge. Community-based treatment prior to entering RR, and receiving IW during the same treatment journey as RR, were associated with lower likelihood of SCNR.
Conclusions: In this first national effectiveness study of AUD in the English public treatment system for alcohol-use disorders, 59% of patients successfully completed treatment within 12 months and did not represent for more treatment within six months. Longer duration of treatment and provision of structured continuing care is associated with better treatment outcomes.

1. Introduction

Alcohol use is a leading risk factor for morbidity and mortality (World Health Organisation, 2014). An estimated 3.6% of the global population aged 15–64 years meet criteria for alcohol use disorder each year (AUD; American Psychiatric Association, 2013), with relatively higher rates estimated for Europe (5.5%; Rehm et al., 2009). Negative health, social and economic consequences are higher among the population with AUD (Hasin, Stinson, Ogburn, & Grant, 2007; Odlaug et al., 2016). In Europe, it is estimated that AUDs are responsible for 60% of alcohol-related mortality (Rehm, Shield, Gmel, Rehm, & Frick, 2013). There are concerns that only a minority of people with AUD access treatment services (United Nations, 2015). For example, in England just 6% of those with AUD in England receive treatment (National Institute for Health and Care Excellence, 2011; UK Home Office, 2012).

* Corresponding author at: Institute of Psychiatry, Psychology and Neuroscience, King's College London, Box 48, DeCrespigny Park, Denmark Hill, London SE5 8AF, United Kingdom.
E-mail address: john.marsden@kcl.ac.uk (J. Marsden).

https://doi.org/10.1016/j.jsat.2018.02.001
0740-5472/

The goal of AUD treatment is to help patients quit drinking or prevent harmful consumption, thereby reducing the health, social and economic harms (Haber, Lintzeris, Proude, & Lopatko, 2009; Rahhali et al., 2015). In the English public healthcare system, structured AUD treatment is mainly delivered by National Health Service or third-sector providers in the outpatient/community setting, offering psychosocial interventions (including motivational, cognitive behavioural, family/social network modalities and facilitation of access to 12-step groups) and pharmacotherapies (including acamprosate and naltrexone for approximately 6 months).

This is complemented by a relatively small number of inpatient withdrawal (IW) and residential rehabilitation (RR) services. Patients are treated in the community or inpatient/residential setting based on a clinical assessment of problem severity and complexity; patient preference; and service availability (National Institute for Health and Care Excellence, 2011). There is some provision of detoxification management in the community over 7–10 days typically using benzodiazepines (National Institute for Health and Care Excellence, 2011).

IW or RR are usually indicated for people with greater AUD severity (e.g. those drinking >30 standard drinks per typical drinking day), or instances of complexity due to unstable housing; comorbid psychiatric/physical conditions; or a history of seizures. IW is usually 5–7 nights in a controlled hospital environment with pharmacological interventions for medical management of withdrawal (National Institute for Health and Care Excellence, 2011). RR is usually a 6–12 weeks stay in a structured, residential facility which provides a phased, structured programme of psychosocial interventions. Detoxification support may be provided as needed. RR programmes usually follow an underlying therapeutic philosophy, including 12-step; therapeutic community; faith-based practice; cognitive behavioural therapy and social learning; personal and skills development; or an eclectic/integrated approach (Moos, Moos, & Andrassy, 1999).

Routine delivery of AUD treatment interventions is remarkably under-researched. Our group has previous reported reductions in offending associated with AUD treatment (Willey, Eastwood, Gee, & Marsden, 2016), but there have been no national outcome studies. Addressing this gap is important because treatment outcomes in the clinic cannot be assumed to be the same as randomised controlled trials. AUD intervention trials are often designed to answer questions of efficacy; with participants selected on restricted characteristics (Witkiewitz, Finney, Harris, Kivlahan, & Kranzler, 2015); using very detailed research assessment procedures (Epstein et al., 2005); and implemented with complex intervention exposures that are not routinely available in the healthcare system (Allen et al., 1997).

The National Drug Treatment Monitoring System evaluates all public AUD treatment services in England (NDTMS; Public Health England, 2015b). NDTMS has been in operation since 2005/06 and had an initial focus on services providing structured treatment and care for people with drug use disorders. All operational public alcohol and drug treatment services who deliver treatment interventions now report to the system, and ~98% of patients consent to the use of their administrative and clinical data for local treatment system needs assessment and national research (Marsden et al., 2009; Marsden et al., 2012; White et al., 2015; Willey et al., 2016).

In 2008/09, NDTMS was enhanced to monitor outcomes from all public treatment services for AUD. Elsewhere, we report on the effectiveness of community-based AUD interventions (Peacock et al., under review). In this report, we estimate the clinical effectiveness of IW and RR interventions for AUD in the English public healthcare system.

2. Materials and methods

2.1. Design

This was an observational, follow-up study of all individuals accessing publicly funded, IW and/or RR treatment for AUD in England. The study included all 152 upper-tier local authorities within England, and all specialist AUD services. The study is reported according to the STROBE and RECORD guidelines for cohort research (Benchimol et al., 2015).

2.2. Patient and treatment information

NDTMS records were accessed on patient-demographic, behavioural, clinical and treatment outcome variables for each episode of treatment, including the dates of starting and finishing specific treatment interventions and the treatment exit date (Public Health England, 2015a, 2015b).

Reflecting national reporting standards (Public Health England, 2015b), individual treatment episodes were concatenated into 'treatment journeys', whereby multiple episodes (community-based or residential program) are subsumed under a single journey. AUD intervention episodes were allocated to the same journey if fewer than 21 days elapsed between the date of ending one treatment modality and the date of starting a subsequent one. In this way, a treatment journey for a patient could comprise a single intervention episode; concurrent episodes provided by more than one agency; or a continuing care package of consecutive episodes provided by one or more service providers.

2.3. Study cohort

The study population was adults (aged ≥18 years) who commenced IW and/or RR treatment for primary AUD between 1 April 2014 and 31 March 2015 ($N = 3861$). Patients were not included in the study cohort if they: (1) reported problematic use of other psychoactive substances at assessment; (2) had missing information on drinks per drinking day (DDD) at both triage and treatment admission; or (3) had missing information on clinical status at discharge were not considered for inclusion.

Analyses were based on the patient's first treatment journey during the period (hereafter 'index journey'). The observation period commenced from the date of starting IW or RR and ended: (1) six months after the date of discharge from the index journey, if discharge occurred within 12 months of starting IW or RR, or (2) 12 months after starting IW or RR if the patient was not yet discharged (the latter group was excluded from analysis of the primary outcome). Periods in community-based treatment subsequent but not prior to IW or RR contributed to the observation time, with discharge date adjusted accordingly. If the index journey involved progression from IW or RR, or vice versa, it was categorised as involving both.

2.4. Outcome measure

The study outcome measure is the English national outcome standard, defined as the proportion of the cohort that successful completed treatment within 12 months of commencement with no representation within six months (SCNR; Public Health England, 2015b).

The proportion of patients treated who complete treatment successfully has been used before in the AUD treatment literature (Alterman, Langenbucher, & Morrison, 2001). This outcome may be associated with improvements in personal and social functioning (Finigan, 1996), but it does not identify sustained benefit. This is important given the relapsing nature of AUD. In the present context, re-presentation for further AUD treatment within six months of discharge is taken to be an indicator of remission.

Treatment journeys were categorised according to clinical assessment of the patient's discharge status, as: (1) successfully completed treatment within 12 months; (2) retained in the same treatment journey at 12 months from entry; or (3) withdrawn from treatment journey within 12 months of entry (unsuccessful transfer between agencies; treatment terminated due to incarceration; patient dropped out