

# Treatment Outcomes for DIP Clients in Liverpool (July 11 - June 12)

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## EXECUTIVE SUMMARY

The main objective of the Drug Interventions Programme (DIP) is to identify and engage with drug users in the criminal justice system in order to channel them into appropriate treatment services. In line with research evidence it is assumed that if this treatment is effective it will result in reduced drug use and therefore reduced offending. This report aims to investigate outcomes for DIP clients resident in Liverpool who were referred to treatment between 1<sup>st</sup> July 2011 and 31<sup>st</sup> December 2011 as part of their DIP care plan and who had a corresponding treatment journey recorded on the National Drug Treatment Monitoring System (NDTMS) (including data from the Treatment Outcomes Profile) between 1<sup>st</sup> July 2011 and 30th June 2012.

## KEY FINDINGS

- Rates of attendance to structured drug treatment after a DIP referral were reasonably high.
- Non-opiate and / or crack users (non-OCU) were much more likely than opiate and / or crack users (OCU) to have a successful exit from treatment. OCU are likely to be responsible for a higher volume of crime and therefore work to address lower rates of successful exit from treatment among this group should be considered.
- Findings suggest that there continues to be issues with treatment providers' understanding of, and appropriate use of NDTMS discharge codes which may underestimate treatment success.
- In general, OCUs spent longer in treatment than their non-OCU counterparts but length of time engaged was not necessarily associated with better outcomes.
- There were significant improvements for non-OCUs in particular on at least some measures of drug use and wellbeing from TOP data.
- In contrast to previous evidence, treatment outcome measures from TOP did not vary significantly regardless of whether the client's exit from treatment was successful or unsuccessful.

There is evidence of good practice in terms of DIP clients' initial engagement in structured treatment, treatment completion and outcomes for clients resident in Liverpool. Whilst the evidence is strong for non-OCU it is less so for OCU (those likely to present with the more challenging issues and who may be responsible for a greater volume of crime). There still remains scope for improvement in order to retain OCUs in treatment so that they can work towards more successful outcomes, help reduce their drug use further and improve their overall health and wellbeing.

## THE AIM OF THE REPORT

The aim of this report is to investigate treatment outcomes for DIP clients resident in Liverpool, specifically those who were referred to structured drug treatment as part of their DIP care plan. The report examines the relationship between treatment outcomes, time in treatment and a selection of client characteristics. By highlighting groups of clients for whom treatment outcomes are less positive, treatment providers will gain insight into client groups in need of greater attention or more robust engagement procedures. This information will help to ensure such individuals remain in contact with treatment services resulting in the most successful treatment outcomes possible. Findings are presented separately for OCUs and non-OCUs in order to provide a more detailed understanding for each of these groups.

## INTRODUCTION

### DRUG USE IN ADULTS

It is estimated that 3.0% (nearly 1 million) of adults aged between 16 and 59 years old in England and Wales have used a Class A drug in the last year (Home Office, 2012). The main Class A drugs used by this age group were cocaine (any) (2.2%), ecstasy (1.4%) and opiates (0.2%). Cannabis, a Class B drug, was used by a higher proportion of this age group (6.9%). In 2010/11 there were an estimated 298,752 opiate and crack users (OCU's) in England (corresponding to 8.67 per thousand of the population aged 15-64 years) with the North West region having the highest prevalence at around 49,426 OCU (corresponding to 10.83 per thousand of the population), 16.6% of the national figure (Hay et al, 2013).

### STRUCTURED DRUG TREATMENT

The National Treatment Agency (NTA) was set up by the government in 2001 to increase the availability, capacity and effectiveness of drug treatment in England. They produced a National framework called 'Models of Care' (NTA, 2002, 2006 update) which set out to provide national guidance on the commissioning and provision of this drug treatment for adults, including the division of treatment into four tiers. This approach has been reviewed to complement the most recent Drugs Strategy (Home Office, 2010a) and as a result the Building Recovery in Communities (BRIC) framework has been developed (NTA, 2011a). In April 2013 NTA became part of a larger Public Health England (PHE) umbrella group but retained its responsibilities covering drug treatment.

Of the four tiers of drug treatment, tiers 3 (structured community-based drug treatment services) and 4 (residential and inpatient services for drug and alcohol misusers) are collectively referred to as structured drug treatment. According to NTA guidelines, structured drug treatment follows a client's assessment and is delivered in accordance with a care plan, outlining clear goals that are reviewed regularly. These treatments may run concurrently or in a sequential order (NTA, 2010a). Data on structured drug treatment are collected from all drug treatment agencies in England via the National Drug Treatment Monitoring System (NDTMS) and these data is the focus of this report.

There is much international research available to support the effectiveness of treatment accessed by drug misusing clients. The Australian Treatment Outcomes Study (ATOS) interviewed clients up to one year after receiving opiate treatment between February 2001 and August 2002. It found notable reductions in drug use, criminality, psychopathology and injecting behaviour (Teesson et al, 2005). In the United States, the Drug Abuse Treatment Outcomes Studies (DATOS) reported reductions in the number of weekly heroin and cocaine users, as well as a reduction in illegal activity among those who accessed outpatient methadone treatment. In addition, among those who accessed long-term residential treatment, reductions in numbers of weekly cocaine users, those who drank alcohol at problematic levels, those who were unemployed and those who were involved in illegal activity were also reported (Franey et al, 2002).



In the UK, the most influential study of drug treatment outcomes, the National Treatment Outcome Research Study (NTORS) highlighted that clients who had a five year follow up interview reported an increase in abstinence from illicit drugs and a decrease in the frequency of their drug use and crime as well as improvements in their health (Gossop et al, 2001). More recently in England, findings from the Drug Treatment Outcomes Research Study (DTORS) demonstrated reductions in the harmful behaviours associated with substance use (injecting, sharing injecting equipment, overdose risk, and poly-substance use) and offending as well as improvements in social functioning (Jones et al, 2009).

## TREATMENT OUTCOMES PROFILE (TOP)

The NTA developed the Treatment Outcome Profile (TOP) which has been incorporated into the drug treatment system in England since 2007. This is a one page, 20 item measure that focuses on substance use, injecting risk behaviour and crime as well as health and social functioning. It is completed when a client starts treatment, at regular treatment review stages and when a client exits treatment. This measurement tool has been psychometrically evaluated and has appropriate levels of reliability and validity with a completion rate target set by the NTA (NTA, 2011b).

## DRUG INTERVENTIONS PROGRAMME (DIP)

DIP is an initiative set up by the Home Office in 2003 with an overarching aim to break the cycle of substance use and crime and as a result reduce acquisitive crime in communities within England and Wales. The most recent drug strategy, Reducing Demand, Restricting Supply, Building Recovery: Supporting People To Live A Drug Free Life, embraces the concept of DIP in assisting with the strategy's aims to support drug using offenders and encourage them to access treatment and recovery whilst in contact with the criminal justice system (CJS) (Home Office, 2010a). DIP represents an important engagement opportunity as many of the clients assessed under the programme can be some of the most difficult to reach substance users (Home Office, 2010b). DIP itself is a multi-agency initiative incorporating the Police, the Crown Prosecution Service, the Probation Service, the Prison Service and drug treatment agencies who collaborate to direct Class A drug using offenders towards treatment. These treatments and services represent a holistic support system and include harm reduction interventions and overdose management as well as other more generic services relating to housing, health, independent living, managing finances, developing new social support networks and rebuilding relationships with families (Home Office, 2009).

The DIP process has been largely effective in reducing overall volume of offending (Cuddy et al, 2013; Best et al, 2010; Skodbo, 2007) and although DIP's traditional focus was on directing opiate or crack misusers into treatment, DIP has also been used as a tool to direct powder cocaine users towards suitable stimulant treatments. Ultimately DIP depends on the criminal justice system for identification of suitable clients and this has been verified as a valid route through which clients can receive drug treatment and achieve positive outcomes. Between 1996 and 2006 there was an increase in the number of referrals for structured treatment reported via the CJS (Jones et al, 2009).

## FACTORS ASSOCIATED WITH TREATMENT OUTCOMES

There are many factors associated with positive and negative treatment outcomes for clients who engage in treatment for their drug use. The length of time a client spends in treatment can have a positive impact on their treatment outcome (Teesson et al, 2005; Gossop et al, 1999, 2001). A report by Beynon et al (2008) which focused on a cohort in the North West of England highlighted that of those in treatment, 74.8% were retained for 12 weeks or more. The report also warned that in the UK factors that may influence a client to remain in treatment are poorly understood due to lack of research. This 12 week period is taken to be a successful retention threshold by the NTA.

The NTA, now part of Public Health England, is aware that client retention in treatment can be challenging and may result in unsuccessful discharges and as a result have put guidelines in place to encourage a higher rate of planned outcomes (NTA, 2009). Levels of planned and unplanned discharges are scrutinised with treatment reports filtered down to local level regularly. An NDTMS report that focused on the North West of England indicated that of clients who had a discharge reason recorded in 2009/10, 41% had a planned discharge (NTA, 2011c).

In the US, clients who were older, male and / or involved in the criminal justice system were positively linked with either longer treatment retention or successful treatment completion (Hser et al, 2004). However this is challenged by findings from Cheshire and Merseyside which indicated that gender and age group were not significantly related to whether clients dropped out of treatment or were discharged drug free from treatment (Beynon et al, 2006). In fact, according to findings from this study, younger clients were significantly more likely to drop out of treatment if they had been referred via the criminal justice system compared to other referral routes.

In contrast to males, female problematic drug users have some specific issues which contribute to poor outcomes:

- Pregnancy or child care
- Sex working – “Women engaging in sex-for-money or sex-for-drugs exchanges are likely to be at greater risks of both negative health and social consequences”
- Sexual health needs, including unwanted pregnancy and sexually transmitted infections
- Past experience of sexual and physical abuse
- Mental health needs

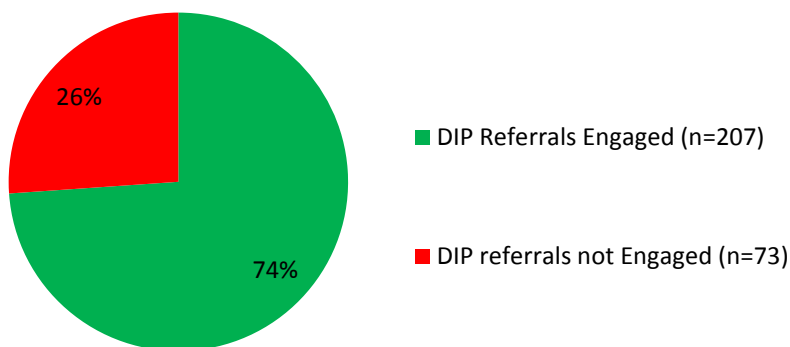
More recently it has been highlighted that females were proportionally well represented in treatment, more inclined to seek treatment, better at engaging in treatment and tended to have better outcomes from treatment than men (NTA, 2010b). The report indicated that within the previous four years the number of women who successfully completed their treatment drug free had doubled and the number of women who were reported as having dropped out of treatment had almost halved. Although drug treatment remains a male dominated environment, the services on offer to women do tend to reflect their complex requirements.

In relation to offending, clients who had committed Misuse of Drugs Act (MDA) offences were more likely to complete their period of DIP case management (Bates and Duffy, 2009). This was in contrast to clients who had committed theft and burglary offences who were less likely to complete their DIP treatment. The authors suggest this may reflect the contrasting nature of the drug use of those clients committing MDA offences (non-OCU) and those committing acquisitive crime (OCU). This conflicted with the findings of Beynon et al (2008) which highlighted that opiate use was not significantly associated with treatment outcomes, with alcohol being the only substance in the study that was significantly associated with outcomes. Bates and Duffy (2009) indicated that DIP clients in Merseyside whose main drug was powder cocaine were more likely to complete their treatment compared to their opiate using counterparts, and heroin using clients were generally engaged in treatment for a longer period of time than cocaine users. These clients also reported being in more settled accommodation but were only slightly more likely to complete their treatment compared to those in temporary accommodation. Problems with accommodation were highlighted as one of the main potential triggers for relapse for clients (Jones et al, 2009) and unemployment has also been linked to negative outcomes for DIP clients (Bates and Duffy, 2009).

**FINDINGS**

**DIP REFERRALS ENGAGED IN TREATMENT**

**Fig L1: DIP Referrals Engaged in Treatment**

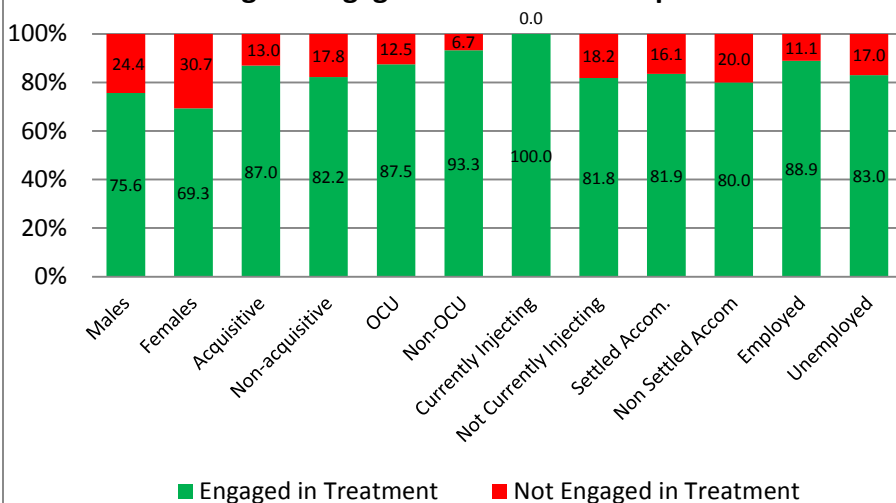


Of the 280 DIP referrals, resident in Liverpool between 1<sup>st</sup> July and 31<sup>st</sup> December 2011, 73.9% engaged in structured drug treatment. A robust comparison between those who did and did not engage in structured drug treatment was difficult as the number of clients who did not

engage in structured treatment was relatively small.

**A COMPARISON OF CLIENTS WHO ENGAGED IN TREATMENT AND DID NOT ENGAGE**

**Fig L2: Engagement Status - Group Characteristics**



The mean age of those who engaged in treatment and those who did not engage was 37.7 in both cases.

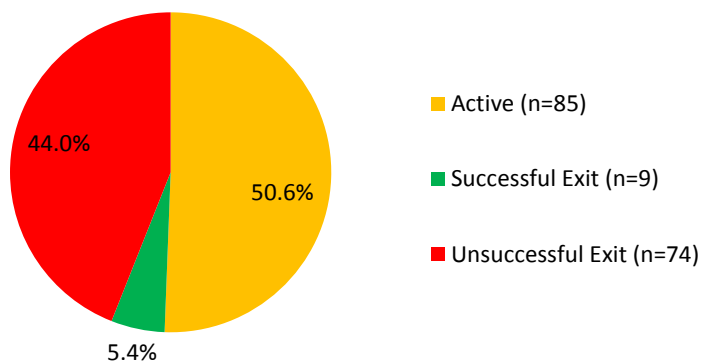
There were no statistically significant associations between treatment engagement and gender, offence type, drug use, injecting status, accommodation status or employment status.

However clients who did not engage in treatment were more likely to be female, commit non-acquisitive offences, be OCU, and be in non-settled accommodation or unemployed.

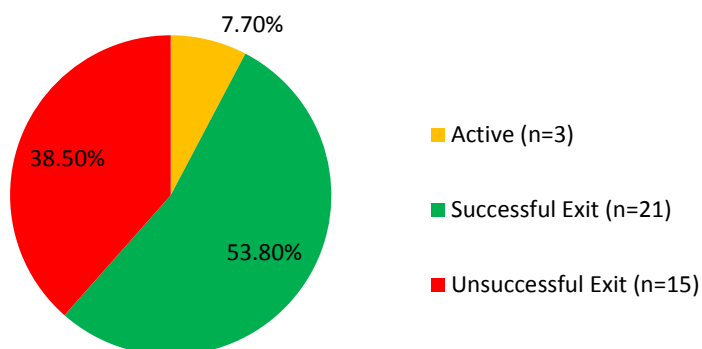
## TREATMENT EXITS

Of the 207 Liverpool residents who engaged in treatment, 81.2% were OCUs and 18.8% were non-OCUs. By the 30<sup>th</sup> June 2012, 49.4% of OCUs and 92.3% of non-OCUs had exited treatment. Successful exits were more common among non-OCUs (53.8% of all non-OCU exits) than OCUs (5.4% of all OCU exits).

**Fig L3: Treatment Status - OCU**

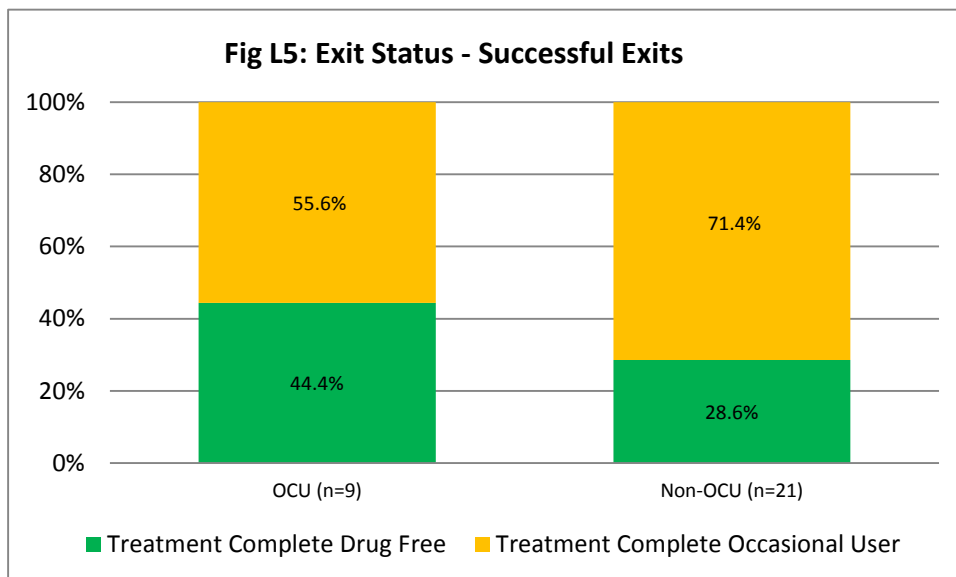


**Fig L4: Treatment Status - Non-OCU**



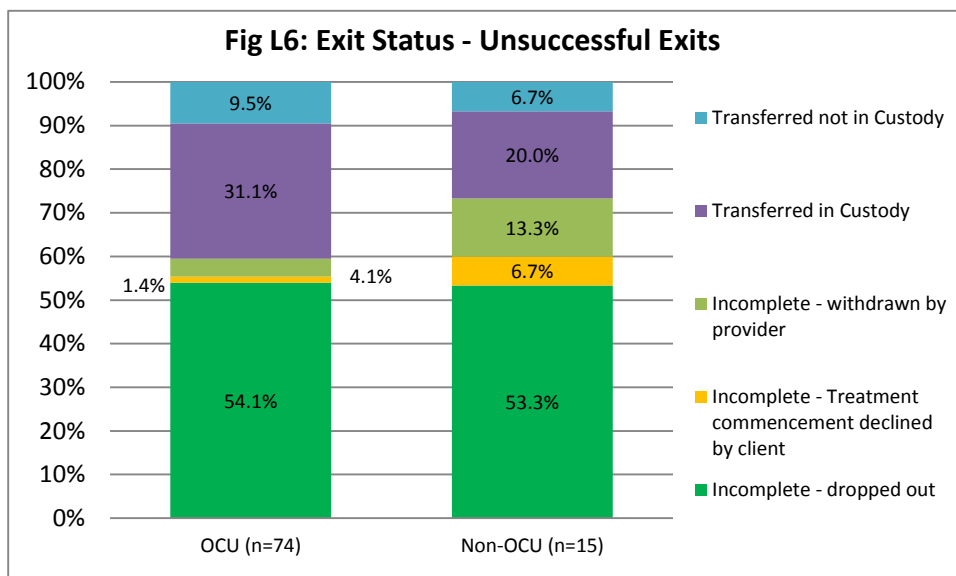
### EXIT STATUS OF SUCCESSFUL EXITS

For OCU successful exit reasons were relatively evenly split between ‘treatment complete drug free’ and ‘treatment complete - occasional user’ (44.4% and 55.6% respectively). Non-OCU successful exits were more likely to be ‘Treatment complete – occasional user’ (71.4%) compared to ‘Treatment complete-drug free’ (28.6%).

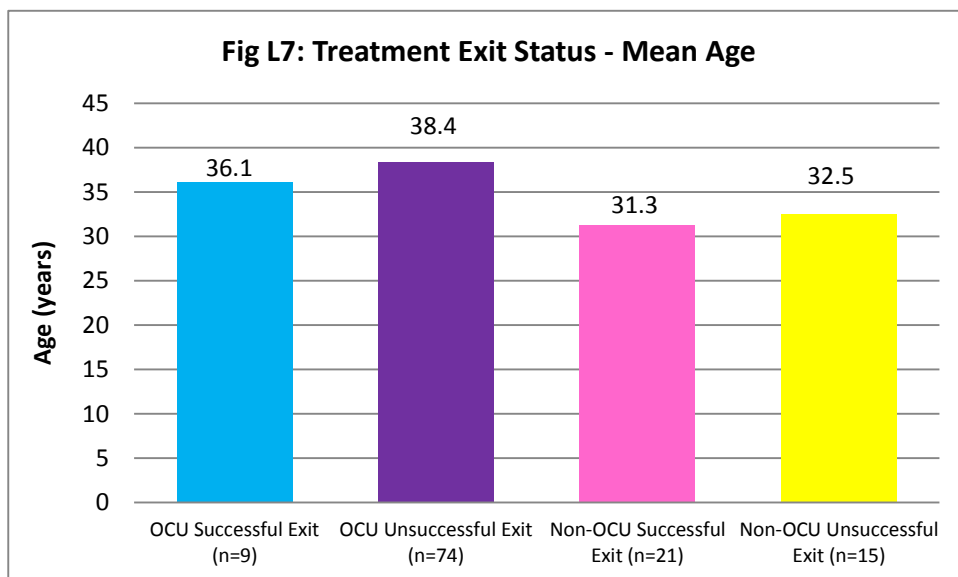


### EXIT STATUS OF UNSUCCESSFUL EXITS

‘Incomplete-dropped out’ was the most common unsuccessful exit reason for both groups suggesting a breakdown in the relationship between clients and the treatment agency. ‘Transferred in custody’ was also a likely unsuccessful exit for both groups.



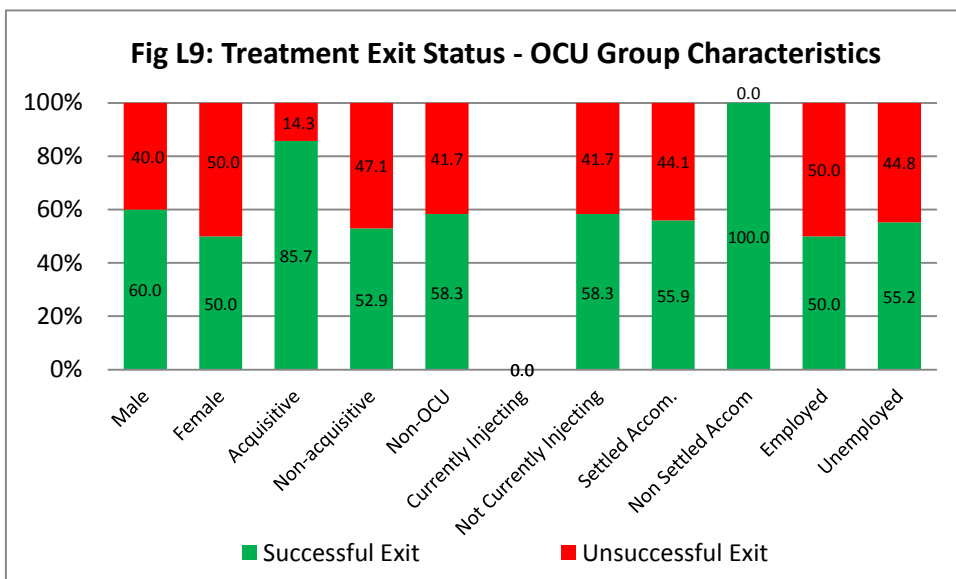
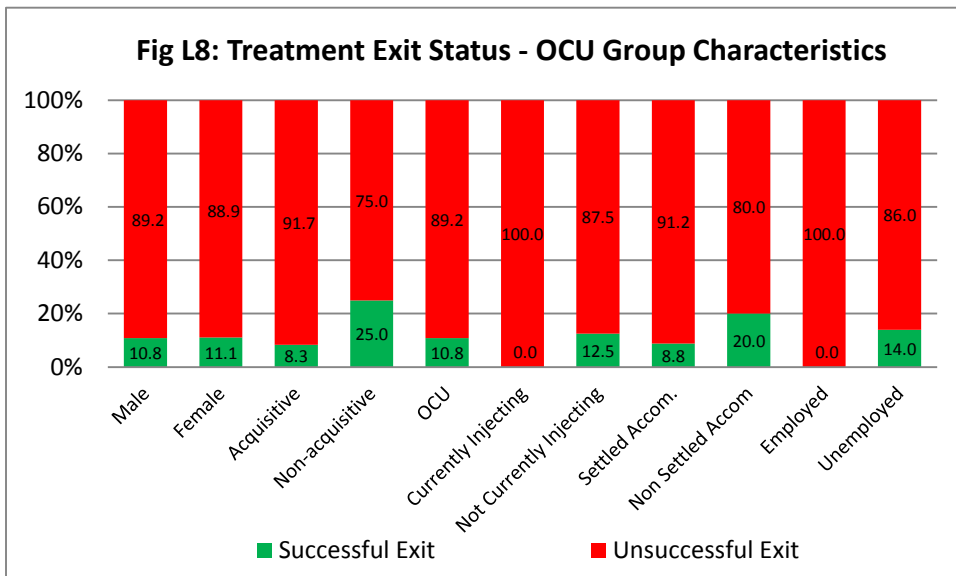
## EXIT STATUS - MEAN AGE



The mean age of OCUs who exited treatment successfully was slightly older than that of non-OCUs. The same trend was evident from both drug groups in relation to those who had an unsuccessful exit.



EXIT STATUS - GROUP CHARACTERISTICS

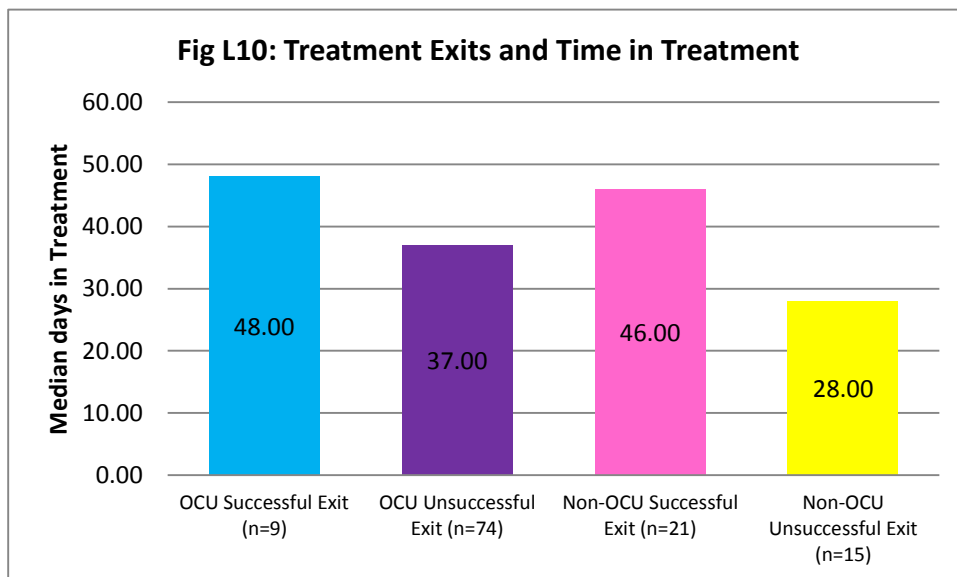


There were no significant associations between treatment exit (successful/unsuccessful) and any group characteristics for OCU or for non-OCU. OCUs were more likely to have unsuccessful exit outcomes across the characteristics measured in contrast to non-OCUs who were slightly more likely to have successful exit outcomes across the measures.

Spearman’s correlation suggested there was no relationship between a client’s age and the length of time they were in treatment. This was the case for both OCU’s ( $r_s = -0.059$ ,  $N=83$ ) as well as non-OCUs’ ( $r_s = 0.273$ ,  $N=36$ ).

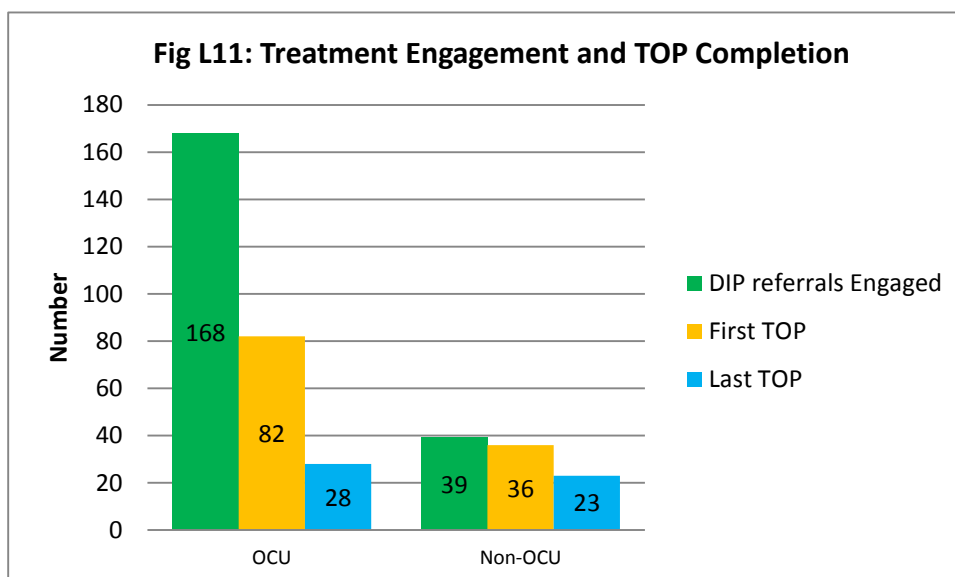
## TREATMENT EXITS AND TIME IN TREATMENT

OCUs and non-OCUs with successful exits spent longer in treatment than their counterparts with unsuccessful exits.

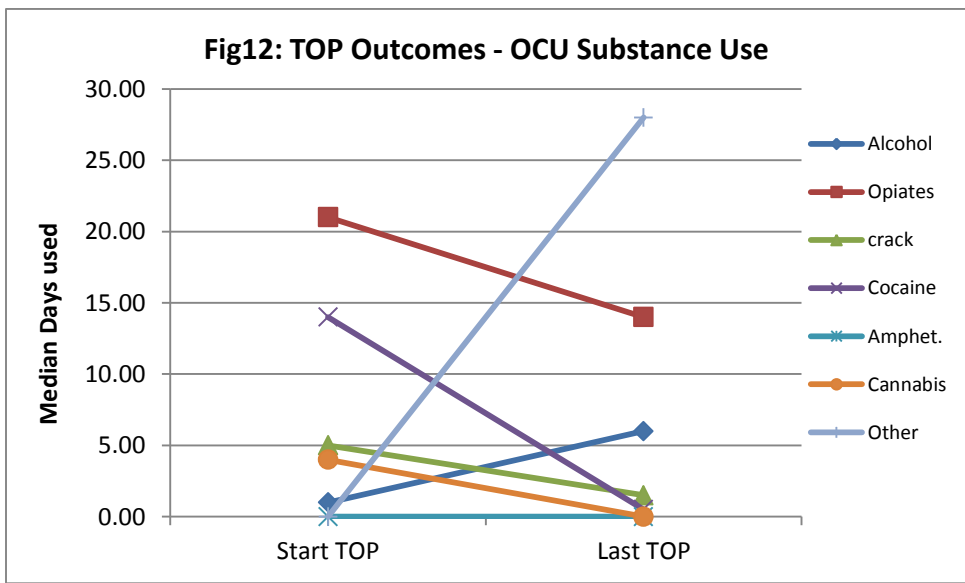


## TOP FINDINGS

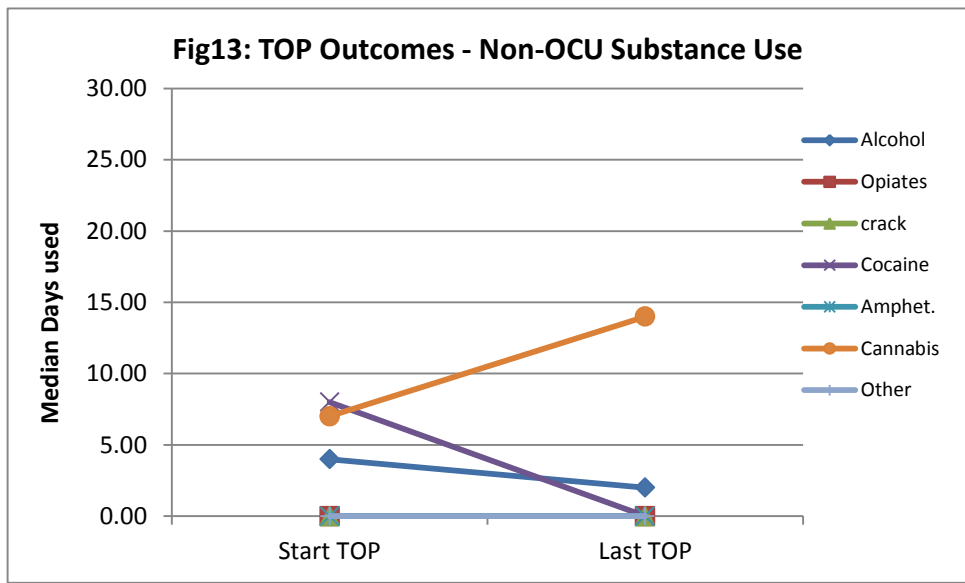
Of the 168 OCUs who engaged in treatment, 48.8% had a start TOP completed and 34.1% of these had an exit or last TOP completed. Of the 39 non-OCUs who engaged in treatment, 92.3% had a start TOP completed and 63.9% of these had an exit or last TOP completed.

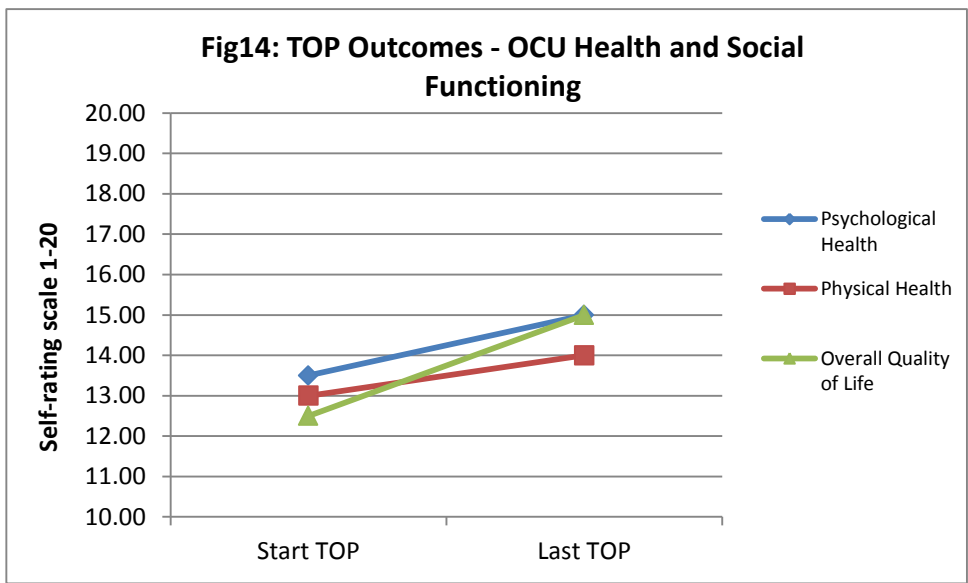


TOP OUTCOMES – SUBSTANCE USE, HEALTH AND SOCIAL FUNCTIONING

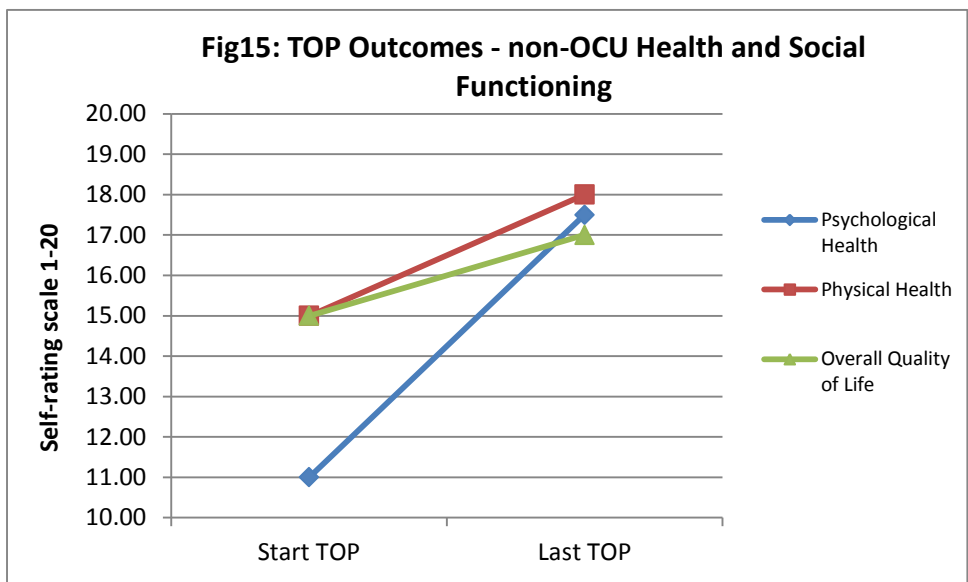


For non-OCUs there was a significant decrease between the first and last TOP in the number of days on which cocaine was consumed ( $Z=-3.070$ ,  $p<0.01$ ).



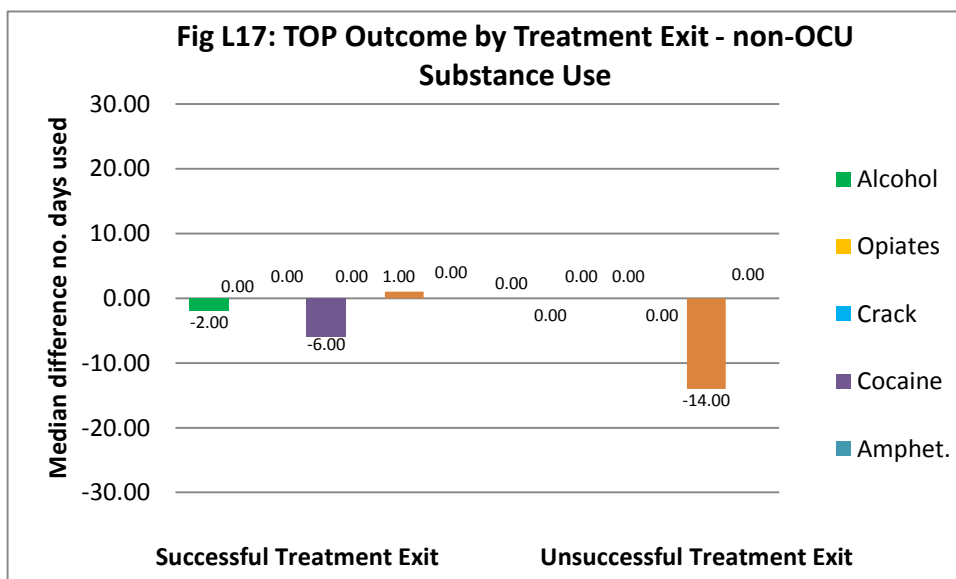
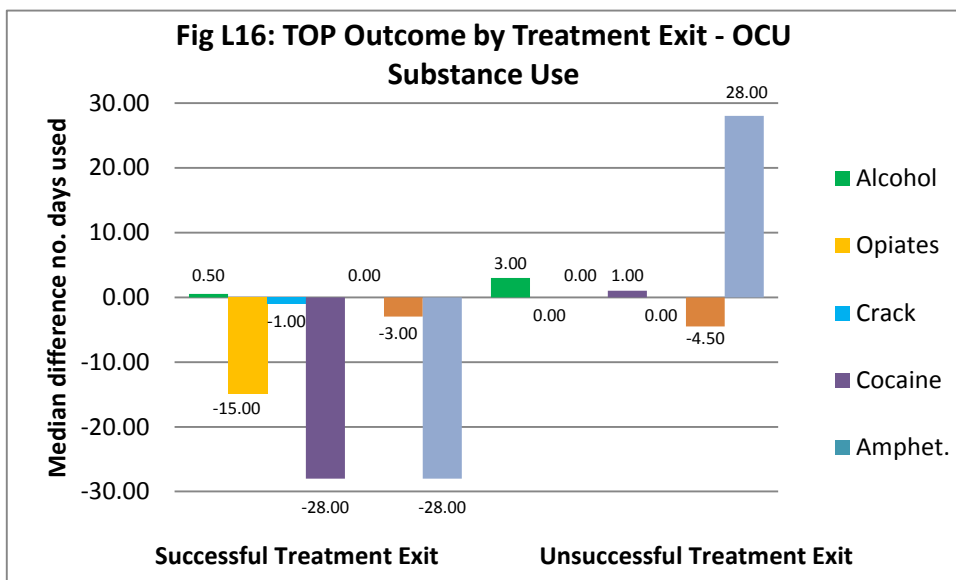


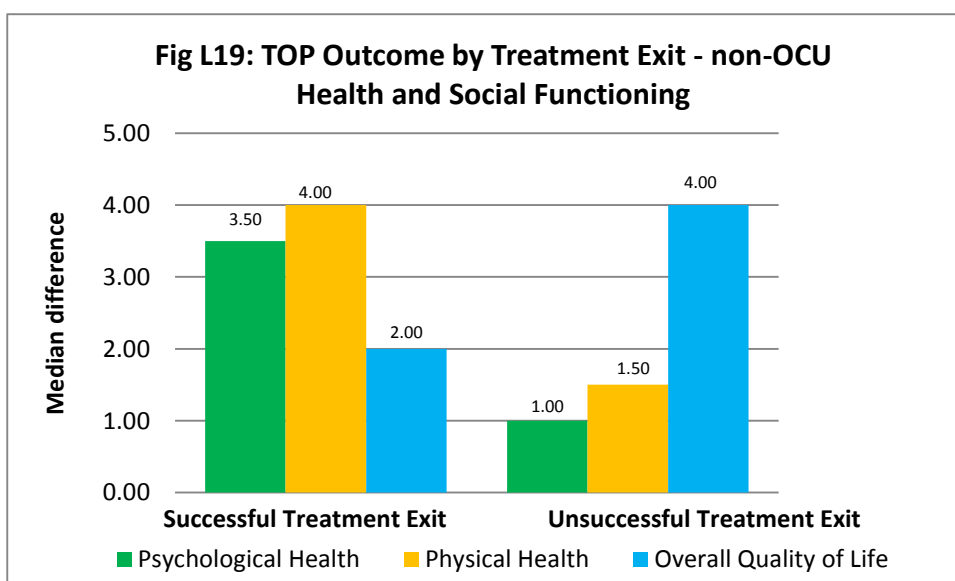
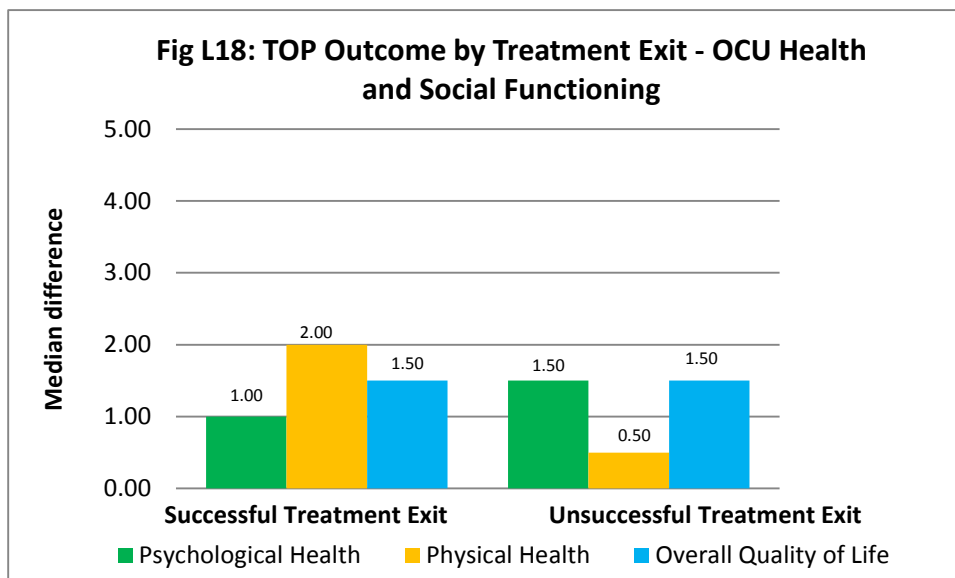
Self-reported psychological health and overall quality of life measures saw significant increases among both OCUs ( $Z=2.284$ ,  $P<0.05$ ;  $Z=2.581$ ,  $P<0.01$  respectively) and non-OCUs ( $Z=3.928$ ,  $P<0.001$ ;  $Z=3.526$ ,  $P<0.001$  respectively). There was also a significant increase in physical health for non-OCUs ( $Z=3.415$ ,  $P<0.001$ ).



**TOP OUTCOMES BY TREATMENT EXIT – SUBSTANCE USE, HEALTH AND SOCIAL FUNCTIONING**

There were no significant differences between clients with a successful exit and those with an unsuccessful exit in terms of changes in substance use, self-reported health (psychological health, physical health or quality of life), education or employment. This was the case for both OCUs and non-OCUs.





## DISCUSSION AND CONCLUSION

The aim of this work was to investigate treatment outcomes for DIP clients resident in Liverpool who were referred to structured drug treatment as part of their DIP care plan. The report examines the relationship between treatment outcomes, time in treatment and a selection of client characteristics. There were significant improvements in the TOP scores for psychological health and overall quality of life reported for OCU and non-OCU clients as well as significant improvements in the physical health of non-OCU clients. The following section summarises key points from the analysis along with resulting recommendations.

### DIP REFERRALS TO TREATMENT

Rates of attendance for Liverpool residents into structured drug treatment after a DIP referral (73.9%) remained similar to the engagement rates from the previous releases of this report (75.9%, Howarth et al, 2012; 64.9%, Howarth et al, 2011). This level of engagement is below that expected by PHE (75%) and this continued low level may suggest either issues with ensuring engagement in treatment within the approved time frame (28 days) or that the recording of the client's attendance at treatment wasn't adequate at the time the data for this report was produced. The Liverpool DIP monthly report highlights lengthy waiting times between agencies which may also be affecting these low engagement rates (Cuddy et al, 2012).

### RECOMMENDATION

*Liverpool Addaction should have robust protocols in place for actions taken when a client does not attend for their initial treatment appointment post DIP referral, including the use of outreach. Since the previous release of this report, Liverpool Addaction has increased their focus on their outreach services within Addaction. This work does not seem to be reflected in the current figures but suggests the low engagement figures may be linked to something else i.e. lengthy waiting times between agencies and this should be further investigated.*

### RECOMMENDATION

*Client's rate of attendance could be improved. As data used in this report are historical, Liverpool should ascertain whether this continues to be the case and if so determine whether clients' actual rate of non-attendance at treatment continues to be high or if inadequate recording of treatment attendances is the problem. As other areas in Merseyside have higher rates of attendance, as highlighted in the previous releases of this report, best practice examples could be sought from colleagues in these areas as to monitoring or operational processes.*

It is worth noting that there were low numbers of clients who did not attend treatment (73) and analyses examining differences in characteristics between clients who engaged and those who did not often lacked robustness due to the small number in the group who did not engage. Although a longer time period was examined again, compared to the initial report, in order to produce a larger 'did not engage' group for

comparison, the numbers of clients did not increase for this group as expected (72, Howarth et al, 2012; 67, Howarth et al, 2011) .

## RECOMMENDATION

*The rates of initial treatment engagement seen among women in Liverpool remain low (69.3%), although there was a slight increase compared to previous years (66.7%, Howarth et al, 2012; 63.6%, Howarth et al, 2011). This remains contrary to national trends (NTA, 2010a) and warrants further investigation to determine whether there are any specific reasons why women are less likely to attend after referral from DIP to structured treatment.*

## TREATMENT EXITS AND CLIENT CHARACTERISTICS

In general OCUs were much more likely to still be engaged in treatment after six months than their non-OCU counterparts, reflecting the more complex nature of this group's addiction and related health and social issues (lower levels of recovery capital) (Cloud & Granfield, 2008, Howarth and Duffy, 2010).

However, OCUs were much less likely to have a positive treatment exit than their non-OCU counterparts. This is in contrast to previous findings for the treatment system in general that suggest opiate use did not significantly influence treatment outcomes (Beynon et al, 2008) but is in line with previous work examining DIP engagement specifically (Bates and Duffy, 2009). For OCUs, unsuccessful exits outweighed successful exits, whilst for non-OCU this trend was reversed.

There was a higher proportion of clients who exited treatment 'treatment complete - occasional user' and a lower proportion of clients who exited treatment as 'treatment complete – drug free' for OCUs and non-OCU. This may reflect the existing operational policy regarding the times at which clients are discharged i.e. when completely abstinent or not. However, according to NTA guidelines the 'treatment complete- occasional user' exit code cannot be used for OCUs, so there would appear to be some issues with mis-recording in Liverpool which needs to be addressed.

Just over half of OCUs (54.1%) and non-OCU (53.3%) who had an unsuccessful exit were recorded as 'incomplete – dropped out'. This highlights a large group of clients from both drug groups who are in need of treatment but have disengaged from the process. This is a considerable concern as these clients may be vulnerable and / or at risk of returning to a lifestyle of drug use and / or offending. DIP data from the monthly Liverpool DIP report (Cuddy et al, 2012) suggests that the lengthy waiting times between agencies may be contributing to this as clients are being exited as 'incomplete-dropped out' once the 21 day timeframe has lapsed post referral.



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## RECOMMENDATION

*Liverpool Addaction should establish why such a high volume of clients have disengaged from treatment and how this may be prevented in future. In addition to this, Addaction should also investigate the level of outreach work that was undertaken with these clients to re-engage them and address any shortfalls in the process and ensure that their new processes are effective as well as further investigating the on-going issues regarding waiting times for clients to be seen at other agencies.*

There was also a proportion of clients exiting with the reason 'transferred not in custody', particularly for OCUs. This was categorised as an unsuccessful exit as it was the last contact in their treatment journey (i.e. there was no further record of a contact on NDTMS). This may reflect a failure to ensure that the client attended their onward referral within the appropriate time frame (21 days) or that there are issues with monitoring; either in recording the attendance at the follow on agency or using this exit code when clients have actually been referred to receive Tier 2 treatment. In addition to this issue, clients may have been legitimately referred to a D(A)AT outside of the North West and as a result their attendance at treatment would be outside the scope of this report. Clients may have also been referred through a route not captured by NDTMS such as general practice prescribing which did not involve the provision of structured support. This issue was highlighted in previous releases of this report (Howarth et al, 2012; Howarth et al, 2011)

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## RECOMMENDATION

*Liverpool Addaction should ensure that staff have a clear understanding of NDTMS discharge definitions particularly when transferring to other agencies. An audit of discharge reasons should highlight any inaccuracies helping to ensure that accurate discharge data is recorded. Data sharing and / or referrals between agencies may also need to be improved to ensure data (client initials, date of birth, gender) are recorded correctly on NDTMS compliant systems.*

In line with previous findings for Merseyside and Cheshire (Beynon et al, 2006) little association between client characteristics and treatment exit status emerged. In part this may be due to the relatively small numbers of clients included in analysis once they had been categorised by exit status, characteristic and drug use type (OCUs / non-OCUs).

## CLIENT CHARACTERISTICS, EXIT STATUS AND LENGTH OF TIME IN TREATMENT

The interaction between time in treatment, treatment exit status and drug use type (OCUs / non-OCUs) provided findings similar to previous releases of this report. OCUs spent longer in treatment than their non-OCU counterparts possibly reflecting the relative complexity of issues experienced by OCUs and non-OCUs. Both OCUs and non-OCUs with successful treatment exits spent considerably more time in treatment than those with unsuccessful exits.

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## RECOMMENDATION

*Services should be aware that the interaction between length of time in treatment and successful outcome is not necessarily straightforward. Clients' characteristics, in particular drug use, are likely to influence the optimum engagement period. However, generally length of time in treatment and exit status did not vary significantly across client characteristics, consideration should also be given to what treatment or data collection variables may be influencing recorded outcomes.*

## TOP COMPLETION

There was a high rate of initial TOP completion for the non-OCU cohort although rates were much lower for OCUs. This may not reflect poor monitoring practice as it may be that a proportion of clients were already receiving treatment at the point that they were referred by DIP. The agency already engaged with (likely to be Addaction's non-DIP provision) may have retained responsibility for TOP completion, so there would not be a start TOP on which to base findings. The completion of a last TOP was much lower for these two cohorts, weakening the strength of analysis that could be conducted. It may be that unsuccessful exits took place before clients' review dates and therefore a second TOP could not be completed with them.

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## RECOMMENDATION

*Treatment agencies need to ensure that TOP records are completed in a timely manner during the clients' treatment journey in order to obtain an accurate overview of the clients' treatment outcomes.*

## OUTCOMES ACCORDING TO TOP

The extent to which treatment had a positive impact on DIP clients varied substantially between drug use types (OCUs / non-OCUs) but in general there was evidence of positive progress in both drug groups. There were significant reductions in cocaine use and significant improvements in all measures of health and wellbeing among non-OCUs. Outcomes for OCUs were less encouraging and included an increase in the use of alcohol and other drugs. However some positive trends did emerge and included a reduction in the use of opiates, crack, cocaine and cannabis. There was an increase in the number of days OCUs were in paid work as well as significant improvements in the psychological health and overall quality of life measures.

Better outcomes for non-OCUs tally with findings for treatment contacts nationally which showed that clients who left treatment having originally presented for cocaine or cannabis use were less likely than OCUs to re-present for treatment or re-enter the criminal justice system (NTA, 2010c). As stated in the previous iterations of this report, better outcomes for non-OCU than OCU are perhaps unsurprising given the greater recovery enablers (Best et al, 2011) they possess. Enablers include abstinence from heroin / crack, stability of housing and engagement in activities e.g. employment. DIP clients who use cocaine (the majority of the non-OCU group) tend not to use heroin / crack, are in settled accommodation and are employed (Howarth and Duffy,

2010) which puts them in a better position to complete their treatment and have a successful outcome. Furthermore, starting rates of cocaine use among non-OCUs were relatively low compared to that of OCUs, indicating a lack of addiction. Nonetheless, improvements in wellbeing indicate that whatever changes clients are making in their lives within their treatment journey are also having additional substantial perceived benefits.

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#### RECOMMENDATION

*Liverpool Addaction should consider how they can adapt treatment approaches to produce better outcomes for OCUs referred through DIP. These clients are those that are likely to be responsible for the greater volume of crime (compared to non-OCUs) and so improvements in their treatment outcomes should result in a greater contribution to DIP's main aim of reducing drug related offending.*

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#### RECOMMENDATION

*Liverpool Addaction need to take special consideration of the impact that increased alcohol consumption may be having on OCUs. Appropriate treatment regimes or referral pathways need to be put in place so that escalating alcohol use can be identified and addressed quickly.*

#### TOP SCORES AND TREATMENT EXIT STATUS

In contrast to previous work suggesting successful exits are associated with improved treatment outcomes (NTA, 2010), outcomes as measured through TOP did not vary significantly by clients' exit status (successful / unsuccessful). Although there were greater improvements across many measures reported by OCUs and non-OCUs who had a successful treatment exit than those who had an unsuccessful exit, findings were not significant.

## CONCLUSION

The aim of this report was to investigate treatment outcomes for DIP clients. Engagement with DIP often represents only the first stage of a client's 'journey' and other agencies will play a substantial role in treatment outcomes. As such, any work to address points raised in this report will need to consider the whole treatment system. Positive outcomes for non-OCUs are encouraging. There is also some evidence of positive progress with OCUs but there is still some way to go before recorded outcomes for this group can be considered a success. The segregation of findings between OCUs and non-OCUs undertaken again in this report allows more detailed examination and provides treatment commissioners and deliverers with a better understanding of their relative success with these groups. As always, trends identified in this report may require further investigation before prompting action.

## REPORT LIMITATIONS

There were some limitations with the analysis for this report:

- The data used in the analysis ranged between 1<sup>st</sup> July 2011 and 30<sup>th</sup> June 2012. This allowed a six month overview of the clients' DIP treatment journeys, but some data is now over 12 months old and may not reflect current treatment outcomes.
- TOP data was not available for all clients due to non-completion of last TOP and also non-completion of specific fields within both initial and last TOP. As such the robustness of the TOP findings were reduced.
- Some group sizes were very different in the analysis i.e. those who engaged in treatment and those who did not, those who had a successful or unsuccessful treatment exit etc., reducing the robustness of the comparisons being made between the groups.
- Data on TOP relied on clients' reporting face to face to their key worker which may have created a bias due to clients wanting to please their key worker or to show an improvement in their behaviour.
- The timeframes between the first and last TOP completions may have been quite different for each client and as a result the timeframe within which behaviour change took place or perception of wellbeing altered could be different for each client.

## METHODOLOGY

Data used for this report included clients referred to structured drug treatment (tier 3 or 4 only) on Drug Intervention Record (DIR; the main assessment form for DIP) forms and Activity forms (used to record care plan updates, referrals to treatment and closure details) between 1st July and 31st December 2011. Where clients had more than one referral recorded, only the earliest referral was included in the analysis. Data were removed for non-Merseyside residents. The NDTMS data set included clients engaged in structured drug treatment between 1st July 2011 and 30th June 2012 in order to provide a maximum of six months of treatment data post DIP referral. Analysis was conducted for the Liverpool Drug and Alcohol Action Team only, in order to fulfil their agreed reporting schedule for 2012/13.

### COMPARISON OF CHARACTERISTICS OF CLIENTS ENGAGING IN TREATMENT AND NOT ENGAGING

DIP referral data were matched to NDTMS data by client attributor (initials, date of birth and gender) and D(A)AT of residence. Referrals with a triage date recorded on NDTMS within 28 days of the referral date from DIP were considered to have engaged in structured treatment (this complies with the Home Office business rules for DIP performance monitoring). This produced two groups – clients who engaged in structured drug treatment and clients who did not. The characteristics of these groups were compared (age, gender, offending, drug use, injecting status, accommodation and employment). Statistical testing was undertaken to determine associations between referral outcomes and client characteristics (Chi Square  $\chi^2$  tests) and differences between referral outcomes groups (unrelated t-tests). Data for this analysis were taken from DIR and Activity forms. Data regarding offending, drug use, injecting status, accommodation or employment are not collected on Activity forms and so could only be analysed for a sub-set of the cohort.

### COMPARISON OF CHARACTERISTICS OF CLIENTS WITH A SUCCESSFUL AND UNSUCCESSFUL TREATMENT EXIT

Clients engaging in structured drug treatment were placed in three groups – those active, those with a successful exit and those with an unsuccessful exit from structured treatment recorded on NDTMS from 1<sup>st</sup> July 2011 up to and including 30<sup>th</sup> June 2012. This report focuses on treatment outcomes, as such only clients with a successful or unsuccessful treatment exit recorded within NDTMS were used for analysis. Unrelated t-tests, Mann Whitney tests and Chi Square tests for association were used to determine relationships between client characteristics upon entry to structured treatment, treatment journey outcomes and length of time retained in treatment. Client characteristics investigated included:

Age	Gender	Offending	Drug Use
Injecting Status	Accommodation	Employment	

For NDTMS purposes “the operational definition of a journey is that episodes are considered as linked elements of an ongoing treatment journey if they are concurrent, or if 21 days or less elapses between discharge from one episode and starting the next. If a period of more than 21 days elapses after discharge from a treatment episode, then the next episode is considered to be the start of a new treatment journey” (NTA, 2010a).

## EXAMINATION OF TOP DATA AND IMPACT OF TREATMENT EXIT ON OUTCOMES

TOP data for clients engaging in structured treatment were analysed to investigate changes during a client's treatment journey in substance use, health and social functioning, accommodation status and education / employment status. TOP data on the following were analysed:

- the number of days drugs and alcohol were used in the previous four weeks
- ratings of clients' psychological health status using a 21 measure scale (0=poor and 20=good)
- ratings of clients' physical health status using a 21 measure scale (0=poor and 20=good)
- ratings of clients' overall quality of life using a 21 measure scale (0=poor and 20=good)
- number of paid work days and / or the number of days attended college or school each week
- an indication of an acute housing problem or being at risk of eviction

In instances where treatment exit TOP data were not available (more likely for clients with unsuccessful discharge reasons) the last review TOP in their treatment journey was used. These TOP data are referred to as 'last TOP' throughout the rest of the report. Analyses were carried out to determine overall changes on the measures outlined above (Wilcoxon matched pairs test) and also to examine differences in the magnitude of changes between clients with a successful or unsuccessful exit from treatment (Mann-Whitney test).

Statistically significant values are marked (\*) and reported under each table where applicable. In cases where this is not marked, the findings were not statistically significant. Due to the small number of clients in some subgroups findings around changes in TOP outcomes should be treated with caution. Data for OCU and non-OCU were analysed separately.

Due to the very low numbers of clients reporting any days in work or education the median values in Table 13 for each area are often zero. In order to better illustrate the variance in the numbers of days clients reported work or education, the inter-quartile range has been included in brackets. Although this is the only table that has these figures reported, they can be provided for other tables on request if required.

In order to analyse the characteristics the data were re-coded as follows:

## HOW DATA WAS RE-CODED

Characteristics	Re-code Groups	Source
Outcome	<p><b>Successful Exit:</b> Treatment complete – drug free Treatment complete – occasional user</p> <p><b>Unsuccessful Exit:</b> Incomplete – dropped out Incomplete – treatment withdrawn by provider Incomplete – retained in custody Incomplete – treatment commencement declined by the client Incomplete – client died Transferred – in custody (lack of prison data currently available to confirm attendance) Transferred – not in custody (No record of client engaging at another agency within the appropriate NTA timeframe of 21 days)</p>	NDTMS
Offending	<p><b>Acquisitive Offences:</b> begging, burglary, going equipped, fraud, handling, possession with intent to supply, robbery, shoplifting, soliciting, supply, theft, theft – car</p> <p><b>Non-Acquisitive Offences:</b> breach, criminal damage, domestic violence, firearms/weapons, motoring offences, possession, public order, warrant, wounding/assault</p>	DIR forms*
Drug Use  (The substances the client initially presented with on their first treatment episode)	<p><b>OCU**:</b> drug 1, 2, or 3 is heroin, methadone, opiates or crack</p> <p><b>Non OCU:</b> drug 1, 2, and 3 is either a benzodiazepine, amphetamine, cocaine (excluding crack) hallucinogens, ecstasy, cannabis, solvents or barbiturates.</p>	NDTMS
Injecting status	<p><b>Currently injecting:</b> injected within the previous 28 days</p> <p><b>Not currently injecting:</b> previously injected (not within previous 28 days), never injected</p>	NDTMS
Accommodation	<p><b>Settled:</b> local authority (LA) / registered social landlord (RSL) rented, private rented, approved premises, supported housing / hostel, traveller, own property, settled with friends/family</p> <p><b>Non-settled:</b> live on streets, use night shelter, sleep on different friends floor each night, staying with friends / family as a short term guest, night winter shelter, direct access short stay hostel, short term B&amp;B or other hotel, squatting</p>	NDTMS
Employment	<p><b>Employed:</b> regular employment, pupil / student</p> <p><b>Unemployed:</b> economically inactive, unemployed</p>	NDTMS

\* Clients who had their referral to structured drug treatment recorded on an Activity form did not have offence information available for analysis and therefore a reduced set was used for this section of the analysis.

\*\* An individual is considered an OCU if they have stated opiates (heroin, methadone) and/or crack cocaine as their main, secondary or third drug at the first episode during their latest treatment journey.

Note: Episodes where alcohol is cited as the primary substance have been excluded from this report so will not be included in OCU figures irrespective of having opiates and/or crack cocaine as their second or third drug.



## APPENDIX

## DATA TABLES

## TREATMENT ENGAGEMENT

Table L1: Treatment Engagement of Liverpool Residents after Referral

Number of DIP Referrals	Number of DIP referrals that engaged (%)	Number of DIP referrals that did not engage (%)
280	207 (73.9)	73 (26.1)

## A COMPARISON OF CLIENTS WHO ENGAGED IN TREATMENT AND DID NOT ENGAGE

Table L2: Liverpool Residents - Engagement Status - Age

Group	Mean Age	t-test Value
Engaged in Treatment (n=207)	37.7	0.023
Not Engaged in Treatment (n=73)	37.7	

Table L3: Liverpool Residents - Engagement Status – Group Characteristics

Groups	Engaged in Treatment (%)	Not Engaged in Treatment (%)	Chi-Square $\chi^2$ Value
Male (n=205)	155 (75.6)	50 (24.4)	1.122
Female (n=75)	52 (69.3)	23 (30.7)	
Acquisitive Offences (n=46)	40 (87.0)	6 (13.0)	0.392
Non-Acquisitive Offences (n=45)	37 (82.2)	8 (17.8)	
OCU (n=56)	49 (87.5)	7 (12.5)	0.709
Non-OCU (n=30)	28 (93.3)	2 (6.7)	
Currently Injecting (n=10)	10 (100.0)	0 (0.0)	2.173
Not Currently Injecting (n=88)	72 (81.8)	16 (18.2)	
Settled Accommodation (n=87)	73 (83.9)	14 (16.1)	0.009
Non-Settled Accommodation (n=10)	8 (80.0)	2 (20.0)	
Employed (n=9)	8 (88.9)	1 (11.1)	0.209
Unemployed (n=88)	73 (83.0)	15 (17.0)	

## TREATMENT EXITS

Table L4: Liverpool Residents - Treatment Status

Area	Active (%)	Successful Exit (%)	Unsuccessful Exit (%)
Liverpool OCU (n=168)	85 (50.6)	9 (5.4)	74 (44.0)
Liverpool Non-OCU (n=39)	3 (7.7)	21 (53.8)	15 (38.5)

Table L5: Liverpool Residents – Treatment Exit Reasons

Treatment Exit Reasons	Number of OCU (%)	Number of Non-OCU (%)
<b>Successful Exits:</b>	<b>(n=9)</b>	<b>(n=21)</b>
Treatment Complete	0 (0.0)	0 (0.0)
Treatment Complete Drug Free	4 (44.4)	6 (28.6)
Treatment Complete – occasional user	5 (55.6)	15 (71.4)
<b>Unsuccessful Exits:</b>	<b>(n=74)</b>	<b>(n=15)</b>
Incomplete – Client died	0 (0.0)	0 (0.0)
Incomplete – Dropped Out	40 (54.1)	8 (53.3)
Incomplete – Retained in Custody	0 (0.0)	0 (0.0)
Incomplete – Treatment commencement declined by client	1 (1.4)	1 (6.7)
Incomplete – Treatment withdrawn by provider	3 (4.1)	2 (13.3)
Transferred in Custody	23 (31.1)	3 (20.0)
Transferred not in Custody	7 (9.5)	1 (6.7)

Table L6: Liverpool Residents - Treatment Exit Status - Age

Age	Mean Age	t-test Value
OCU Successful Exit (n=9)	36.1	-0.792
OCU Unsuccessful Exit (n=74)	38.4	
Non-OCU Successful Exit (n=21)	31.3	-0.333
Non-OCU Unsuccessful Exit (n=15)	32.5	

Table L7: Liverpool Residents - Treatment Exit Status – Group Characteristics

<b>OCU Group</b>	<b>Successful Exit (%)</b>	<b>Unsuccessful Exit (%)</b>	<b>Chi-Square <math>\chi^2</math> Value</b>
Male (n=65)	7 (10.8)	58 (89.2)	0.002
Female (n=18)	2 (11.1)	16 (88.9)	
Acquisitive Offences (n=12)	1 (8.3)	11 (91.7)	1.200
Non-Acquisitive Offences (n=12)	3 (25.0)	9 (75.0)	
OCU (n=83)	9 (10.8)	74 (89.2)	
Non-OCU (n=0)	0 (0.0)	0 (0.0)	
Currently Injecting (n=10)	0 (0.0)	10 (100.0)	1.404
Not Currently Injecting (n=72)	9 (12.5)	63 (87.5)	
Settled Accommodation (n=68)	6 (8.8)	62 (91.2)	1.588
Non-Settled Accommodation (n=15)	3 (20.0)	12 (80.0)	
Employed (n=1)	0 (0.0)	1 (100.0)	0.168
Unemployed (n=57)	8 (14.0)	49 (86.0)	
<b>Non-OCU Group</b>	<b>Successful Exit</b>	<b>Unsuccessful Exit</b>	<b>Chi-Square <math>\chi^2</math> Value</b>
Male (n=30)	18 (60.0)	12 (40.0)	0.266
Female (n=6)	3 (50.0)	3 (50.0)	
Acquisitive Offences (n=7)	6 (85.7)	1 (14.3)	2.272
Non-Acquisitive Offences (n=17)	9 (52.9)	8 (47.1)	
OCU (n=0)	0 (0.0)	0 (0.0)	
Non-OCU (n=36)	21 (58.3)	15 (41.7)	
Currently Injecting (n=0)	0 (0.0)	0 (0.0)	
Not Currently Injecting (n=36)	21 (58.3)	15 (41.7)	
Settled Accommodation (n=34)	19 (55.9)	15 (44.1)	1.513
Non-Settled Accommodation (n=2)	2 (100.0)	0 (0.0)	
Employed (n=4)	2 (50.0)	2 (50.0)	0.038
Unemployed (n=29)	16 (55.2)	13 (44.8)	

## LENGTH OF TIME IN TREATMENT

Table L8: Liverpool Residents – Length of Time in Treatment – Group Characteristics

Groups	OCU Median days in Treatment	Z Score	Non-OCU Median days in Treatment	Z Score
Male	43.00 (n=65)	0.823	30.50 (n=30)	-1.168
Female	34.00 (n=18)		54.00 (n=6)	
Acquisitive Offences	44.00 (n=12)	-0.924	47.00 (n=7)	-0.191
Non-Acquisitive Offences	36.00 (n=12)		46.00 (n=17)	
Currently Injecting	60.00 (n=10)	-0.333	0.00 (n=0)	
Not Currently Injecting	39.50 (n=72)		36.50 (n=36)	
Settled Accommodation	41.50 (n=68)	0.183	63.00 (n=2)	0.069
Non-Settled Accommodation	38.00 (n=15)		36.00 (n=34)	
Employed	44.00 (n=1)	-0.149	28.00 (n=4)	0.580
Unemployed	43.00 (n=57)		31.00 (n=29)	
<b>TOTAL</b>	41.00 (n=83)		36.50 (n=36)	-1.357

## TREATMENT EXITS V TIME IN TREATMENT

Table L9: Liverpool Residents - Treatment Exits by Time in Treatment

	Median days in treatment	Z Score
OCU Successful Exits (n=9)	48.00	0.773
OCU Unsuccessful Exits (n=74)	37.00	
Non-OCU Successful Exits (n=21)	46.00	1.691
Non-OCU Unsuccessful Exits (n=15)	28.00	

## TOP FINDINGS

Table L10: Liverpool Residents – TOP Completion

	Number of DIP referrals that engaged	Number of clients who engaged and completed a first TOP (%)	Number of clients who engaged and completed a last TOP (%)
<b>OCU</b>	168	82 (48.8)	28 (34.1)
<b>Non-OCU</b>	39	36 (92.3)	23 (63.9)

## TOP OUTCOMES

Table L11: Liverpool Residents - TOP Outcomes – Substance Use

Substance Use	Median Start TOP Value	Median Last TOP Value	Z Score
<b>OCU</b>	(no. of days used)	(no. of days used)	
Alcohol (n=14)	1.00	6.00	2.155
Opiates (n=17)	21.00	14.00	-0.351
Crack (n=14)	5.00	1.50	-0.409
Cocaine (n=2)	14.00	0.50	-0.447
Amphetamines (n=0)			
Cannabis (n=3)	4.00	0.00	-1.604
Other (n=3)	0.00	28.00	0.577
<b>Non-OCU</b>			
Alcohol (n=15)	4.00	2.00	-1.881
Opiates (n=0)			
Crack (n=0)			
Cocaine (n=13)	8.00	0.00	-3.070**
Amphetamines (n=0)			
Cannabis (n=7)	7.00	14.00	0.000
Other (n=0)			

\*\*p<0.01

Table L12: Liverpool Residents - TOP Outcomes – Health and Social Functioning

Health and Social Functioning	Median Start TOP Value	Median Last TOP Value	Z Score
<b>OCU</b>	<b>(Self-rating scale 1-20)</b>	<b>(Self-rating scale 1-20)</b>	
Psychological Health (n=28)	13.50	15.00	2.284*
Physical Health (n=28)	13.00	14.00	1.693
Overall Quality of Life (n=28)	12.5	15.00	2.581**
<b>Non-OCU</b>			
Psychological Health (n=22)	11.00	17.50	3.298***
Physical Health (n=23)	15.00	18.00	3.415***
Overall Quality of Life (n=23)	15.00	17.00	3.526***

\*P<0.05; \*\*P<0.01; \*\*\*P<0.001

Table L13: Liverpool Residents - TOP Outcomes – Education/Employment

Education/Employment	Median Start TOP Value	Median Last TOP Value	Z Score
<b>OCU</b>	<b>(no. of days)</b>	<b>(no. of days)</b>	
Days in Paid Work (n=1)	0.00 (0)	20.00 (20)	1.000
Days in College/School (n=0)			
<b>Non-OCU</b>			
Days in Paid Work (n=3)	20.00 (20)	0.00 (0)	-1.342
Days in College/School (n=1)	5.00 (5)	0.00 (0)	-1.000

Table L14: Liverpool Residents - TOP Outcomes – Accommodation

Accommodation	First TOP	Last TOP
<b>OCU</b>	<b>(no. of clients)</b>	<b>(no. of clients)</b>
Acute Housing Problem - Yes	7	1
At Risk of Eviction - Yes	1	0
<b>Non-OCU</b>		
Acute Housing Problem - Yes	0	0
At Risk of Eviction - Yes	0	0

## COMPARISON OF TOP OUTCOMES FOR CLIENTS WITH A SUCCESSFUL AND UNSUCCESSFUL TREATMENT EXIT

Table L15: Liverpool Residents - TOP Outcomes by Treatment Exit – Substance Use

<b>Substance Use</b>	<b>Median Difference Successful Exit</b>	<b>Median Difference Unsuccessful Exit</b>	<b>Z Score</b>
<b>OCU</b>	<b>(no. of days used)</b>	<b>(no. of days used)</b>	
Alcohol (n=14)	0.50 (n=4)	3.00 (n=10)	0.952
Opiates (n=17)	-15.00 (n=2)	0.00 (n=15)	1.578
Crack (n=14)	-1.00 (n=1)	0.00 (n=13)	0.629
Cocaine (n=2)	-28.00 (n=1)	1.00 (n=1)	1.000
Amphetamines (n=0)			
Cannabis (n=3)	-3.00 (n=1)	-4.50 (n=2)	0.000
Other (n=3)	-28.00 (n=1)	28.00 (n=2)	1.141
<b>Non-OCU</b>			
Alcohol (n=15)	-2.00 (n=14)	0.00 (n=1)	0.826
Opiates (n=0)			
Crack (n=0)			
Cocaine (n=13)	-6.00 (n=12)	0.00 (n=1)	1.624
Amphetamines (n=0)			
Cannabis (n=7)	1.00 (n=6)	-14.00 (n=1)	0.134
Other (n=0)			

Table L16: Liverpool Residents - TOP Outcomes by Treatment Exit – Health and Social Functioning

<b>Health and Social Functioning</b>	<b>Median Difference Successful Exit</b>	<b>Median Difference Unsuccessful Exit</b>	<b>Z Score</b>
<b>OCU</b>	<b>(Self-rating scale 1-20)</b>	<b>(Self-rating scale 1-20)</b>	
Psychological Health (n=28)	1.00 (n=8)	1.50 (n=20)	0.078
Physical Health (n=28)	2.00 (n=8)	0.50 (n=20)	-1.392
Overall Quality of Life (n=28)	1.50 (n=8)	1.50 (n=20)	-0.360
<b>Non-OCU</b>			
Psychological Health (n=22)	3.50 (n=20)	1.00 (n=2)	-1.054
Physical Health (n=23)	4.00 (n=21)	1.50 (n=2)	-0.838
Overall Quality of Life (n=23)	2.00 (n=21)	4.00 (n=2)	0.556

Table L17: Liverpool I Residents - TOP Outcomes by Treatment Exit – Education/Employment

<b>Education/Employment</b>	<b>Median Difference Successful Exit</b>	<b>Median Difference Unsuccessful Exit</b>	<b>Z Score</b>
<b>OCU</b>	<b>(no. of days)</b>	<b>(no. of days)</b>	
Days in Paid Work (n=1)	20.00 (n=1)		
Days in College/School (n=0)			
<b>Non-OCU</b>			
Days in Paid Work (n=3)	-6.00 (n=2)	20.00 (n=1)	-1.225
Days in College/School (n=1)	5.00 (n=1)		



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