

# **Audit of the First Twelve months of** **Cuan Dara Detoxification Unit July** **95 to July 96**

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## **EXECUTIVE SUMMARY**

This audit describes the characteristics of patients admitted to Cuan Dara in its first year after opening. One hundred and five admissions were examined. The success of the unit is explored by looking at (i) the proportion of patients completing methadone detoxification, (ii) the proportion completing the full six-week inpatient programme and (iii) the proportion of patients remaining drug free after discharge.

### **Main Points**

- Eighty-eight per cent of those admitted were unemployed.
- The average age of commencement of illicit drug use was 15 years.
- Females were overrepresented, accounting for 34% of admissions.
- Twenty-nine per cent of admissions left hospital prior to detox completion.
- Six patients were dismissed for major breach of the rules.
- Forty-one per cent of patients completed the full programme as planned.
- There was a peak in unplanned discharges in the last few days of the detox.
- No follow-up information was available on 29% of admissions.
- Of the 72 on whom follow-up data was obtained, 49% had relapsed, 26% were drug free and 25% were back on methadone.
- As the year progressed, patients were more likely to both complete detox and have a planned discharge.
- Females and heroin smokers tended to be more likely to complete the detox.
- All patients who left hospital prior to detox completion had relapsed.
- Heroin smokers were more likely than injectors to be drug free at follow-up.
- Those who left hospital early tended to be more likely to relapse.

### **Recommendations**

- A focussed effort is needed to reduce self-discharges in the latter days of detox.
- A more reliable method of ascertaining patients follow-up status will be necessary to more thoroughly evaluate the success of inpatient treatment of opiate dependence.

## **Introduction**

Cuan Dara opened on July 4<sup>th</sup> 1995 in the grounds of Cherry Orchard Hospital. Its primary goal was to provide inpatient treatment of opiate dependant patients. Treatment involved two phases:

Phase one:-Detoxification with Methadone over approximately. 10-12 days.

Phase two:-Intensive counselling and rehabilitation for an additional 4 weeks.

Reported rates for successful completion of detoxification in the inpatient setting range from 70 to 80% <sup>(1,2)</sup> Early reports from the National Treatment Outcome Research Study (NTORS)<sup>(3)</sup> indicate that 38% of those admitted did complete the full inpatient program, equivalent to phases one and two above. (The NTORS study is a large multicentre study currently ongoing in the UK. It's principal aim is to measure the effectiveness of the various treatment approaches to drug addiction, i.e. outpatient detox, inpatient detox, residential treatment, methadone maintenance treatment etc. It is the largest and most comprehensive study of its kind to be undertaken in past fifteen years.)

The ultimate goal of treatment is attaining and maintaining a drug free status. Gossop conducted a study in '84 - '86 which is frequently quoted<sup>(4)</sup>, He reported that 51% of a group who completed an inpatient detox were drug free at six months follow-up and this was confirmed by urine testing. However, only 19% were drug free throughout the full six month period, the remainder having lapsed at some point. A lapse was most likely to occur in the first few days following discharge. In the NTORS study, 45% of patients interviewed two months after discharge reported no heroin use (although 18% reported no heroin use in the three months before admission).

## Patients and Methods

Patients were included if admitted between 4<sup>th</sup> July 95 and 30<sup>th</sup> June 96. They were excluded if the patient was discharged less than fourteen days before the last date (1<sup>st</sup> August '96) on which follow-up information was obtained.

105 admissions (101 patients, four being readmitted) were included in the data analysis.

Details on demographics (i.e. sex, age, employment, etc) and drug use history were obtained from the medical and nursing notes and also from the initial referral form. See appendix 1.

The outcome variables explored were (i) completion of methadone detoxification, (ii) Completion of the full inpatient program and (in) drug use status at follow-up.

On three occasions during the year (1<sup>st</sup> Dec '95, 1<sup>st</sup> Mar '96 & 1<sup>st</sup> Aug 96), attempts were made to follow-up patients who had been discharged for more than two weeks. Consequently, three subgroups were formed -

- Subgroup 1 - Discharged between 4<sup>th</sup> July '95 and 16<sup>th</sup> Nov '95 (n = 31)
- Subgroup 2 - Discharged between 17<sup>th</sup> Nov '95 and 14<sup>th</sup> Feb '96 (n = 23)
- Subgroup 3 - Discharged between 15<sup>th</sup> Feb '96 and 16<sup>th</sup> July '96 (n = 51)

Information on current drug use status was provided by the referring agent, generally the patient's addiction counsellor.

|  | <b>Subgroup</b> | <b>N</b> | <b>%</b> |
|--|-----------------|----------|----------|
| GROUP (determined by date of discharge from Cuan Dara) | One             | 31       | 29%      |
|  | Two             | 23       | 22%      |
|  | Three           | 51       | 49%      |

## Results

Table 1

| VARIABLE          | SUBGROUPS   | n            | %   |
|-------------------|-------------|--------------|-----|
| SEX               | Male        | 69           | 66% |
|                   | Female      | 36           | 34% |
| EMPLOYMENT STATUS | Unemployed  | 93           | 88% |
|                   | Working     | 9            | 9%  |
|                   | Student     | 1            | 1%  |
|                   | FAS         | 2            | 2%  |
|                   | <b>Mean</b> | <b>Range</b> |     |
| AGE @ ADMISSION   | 24.2 y      | 16 - 46y     |     |

Table 1 describes the demographic details. The male to female ratio was two to one. The mean age was just over 24 years. A quarter of patients were 19 or younger, but only six patients were under 18 years of age. Eighty-eight per cent were unemployed.

Table 2

| REFERAL SOURCE  | n  | %   |
|-----------------|----|-----|
| Aishling Clinic | 29 | 28% |
| Tallaght        | 23 | 22% |
| Rialto          | 15 | 14% |
| Baggot St.      | 12 | 11% |
| Castle St.      | 10 | 9%  |
| Ballymun        | 4  | 4%  |
| City Clinic     | 4  | 4%  |
| Talbot Centre   | 3  | 3%  |
| Coolemine House | 2  | 2%  |
| Merchant's Quay | 2  | 2%  |
| Dunlaoire       | 1  | 1%  |

Sources of referral are given in table 2. Five of these sources (Aishling, Tallaght, Rialto Baggot St. and Castle St.) accounted for 84% of all admissions.

*Table 3*

| VARIABLE   | SUBGROUPS         | n            | %   |
|--|-------------------|--------------|-----|
| CURRENT MAIN DRUG OF ABUSE                             | Heroin            | 100          | 95% |
|  | Morphine Sulphate | 2            | 2%  |
|  | Heroin/MST        | 2            | 2%  |
|  | Methadone         | 1            | 1%  |
| CURRENT MAIN ROUTE OF DRUG ADMIN.                      | Intravenous       | 75           | 71% |
|  | 'Skin pop'        | 1            | 1%  |
|  | Oral              | 2            | 2%  |
|  | Smoking           | 27           | 26% |
| NUMBER OF PREVIOUS ATTEMPTED DETOXES                   | 0                 | 36           | 34% |
|  | 1                 | 38           | 36% |
|  | 2 - 3             | 25           | 24% |
|  | 4 +               | 6            | 6%  |
|  | <b>Mean</b>       | <b>Range</b> |     |
| AGE @ 1 <sup>ST</sup> USE OF ANY ILLICIT DRUG          | 15.5 y            | 7 - 36y      |     |
| DURATION SINCE 1 <sup>ST</sup> USE OF ANY ILLICIT DRUG | 8.7 y             | 1 - 31y      |     |
| AGE WHEN 1 <sup>ST</sup> USED OPIATES                  | 19.0 y            | 12 - 37y     |     |
| DURATION SINCE 1 <sup>ST</sup> USED OPIATES            | 5.25 y            | 3 - 28y      |     |

Some features of the patients drug use history are included in table 3. The average age at which use of any illicit substance began, was 15 years. Heroin was the main drug of abuse for 95% of admissions. In one case, methadone was the main opiate of abuse prior to admission. The average duration of opiate use was just over five years. The intravenous route of drug administration was the preferred method of use in 71% of cases. An unrecorded number of those currently smoking heroin had previously injected. Most patients had previously attempted opiate detoxification. One male patient, with a ten year history of opiate use, was recorded as having had 16 previous detoxifications.

*Table 4*

| <b>OUTCOME VARIABLES</b>   |                  | <b>Mean</b> | <b>Range</b> |
|--|------------------|-------------|--------------|
| DURATION OF ADMISSION  |                  | 25 Days     | 1 - 60 Days  |
|  |                  | <b>n</b>    | <b>%</b>     |
| DETOX STATUS i.e. completed more or less than 14 days in hospital. | Completed Detox  | 75          | 71%          |
|  | Incomplete Detox | 30          | 29%          |
| TYPE OF DISCHARGE  | Planned          | 43          | 41%          |
|  | Self discharge   | 56          | 53%          |
|  | Dismissed        | 6           | 6%           |

Twenty-nine per cent of patients left hospital on or prior to day fourteen i.e. before detox was complete. Forty-one per cent of discharges were planned. Six patients were dismissed from the unit for major breach of the rules (generally, drug use on the unit). See table 4.

Of the 62 patients who had unplanned discharges, 17 (27%) left the unit between days eleven to fourteen inclusive. See graph.

*Table 5*

| <b>FOLLOW-UP</b>                              |  |              |                     |
|---|--|--------------|---------------------|
|   | <b>mean</b>                                    | <b>range</b> | <b>25 to 75%ile</b> |
| DAYS TO FOLLOW-UP                             | 74 days  | 14-160 days  | 36-101 days         |
|   |  | <b>n</b>     | <b>%</b>            |
| STATUS @ FOLLOW-UP                            | Drug Free                                      | 18           | 18%                 |
|   | Meth. Detox                                    | 5            | 5%                  |
|   | Meth. Maintenance                              | 13           | 12%                 |
|   | Relapse  | 35           | 33%                 |
|   | Prison   | 3            | 3                   |
|   | No Contact/Unknown                             | 30           | 29%                 |
| FOLLOW-UP STATUS IN BROAD CATEGORIES (n = 72) | Drug Free                                      | 19           | 26%                 |
|   | On Methadone                                   | 18           | 25%                 |
|   | Relapsed                                       | 35           | 49%                 |
|   | (excluding those with no contact or in prison) |              |                     |

The average time gap to follow-up was over ten weeks. Nineteen patients (18%) were reported to have maintained a drug free status. Five patients were undergoing detoxification once again and thirteen were on methadone maintenance. Thirty-five

patients (33%) were known to have relapsed and three were in prison. There was no information available on thirty patients (29%).

Of the seventy-two patients for whom information was available, 26% were drug free and 49% had relapsed. See table 5.

A univariate statistical analysis was performed using chi squared tests for categorical variables and t-tests for means to identify which demographic, drug use and treatment variables were associated with the outcome variables.

*Table 6*

| <b>Predictors of Completed Detoxification (i.e. admitted &gt; 34 days)</b> |              |          |                   |           |
|--|--------------|----------|-------------------|-----------|
|  |              | <b>%</b> | <b>Odds ratio</b> | <b>p</b>  |
| ROUTE OF DRUG USE  | Injecting    | 65%      | 1.0               | 0.07 N.S. |
|  | No injecting | 86%      | 3.2               |           |
| SEX  | Male         | 67%      | 1.0               | 0.2 N.S.  |
|  | Female       | 81%      | 2.1               |           |
| GROUP  | One          | 61%      | 1.0               | 0.12 N.S. |
|  | Two          | 87%      | 4.2               |           |
|  | Three        | 71%      | 1.5               |           |
| N.B. No association reached statistical significance                       |              |          |                   |           |

There was no statistically significant predictor of completion of detoxification (table 6). However, there was a trend in favour of those who did not inject (p=0.07) and those who were female (p=0.2). There was also a trend of increased likelihood that detox would be completed in the latter two-thirds of the year (p=0.12).



Table 7

| Predictors of having a planned discharge |       |     |            |       |
|--|-------|-----|------------|-------|
|  |       | %   | Odds ratio | p     |
| GROUP                                    | One   | 19% | 1.0        | <0.01 |
|  | Two   | 35% | 2.2        |       |
|  | Three | 57% | 5.5        |       |

The only variable which predicted increased likelihood of patients having a planned discharge was the time of year that they were admitted (table 7). Those admitted after mid-February '96 were very much more likely to have a planned discharge compared to those admitted before mid-November '95 (57% vs. 19%, odds ratio 5.5,  $p < 0.01$ ).

Table 8

| Predictors of Follow-up status (n = 72, 'no contact' & 'in prison' excluded) |              |           |              |          |           |
|--|--------------|-----------|--------------|----------|-----------|
| Follow-up status:-   |              | Drug Free | On Methadone | Relapsed | p         |
| ROUTE OF DRUG USE  | No Injecting | 45%       | 14%          | 41%      | <0.05     |
|  | Injecting    | 18%       | 30%          | 52%      |           |
| DETOX.   | Incomplete   | 0%        | 50%          | 50%      | <0.01     |
|  | Completed    | 34%       | 18%          | 48%      |           |
| TYPE OF DISCHARGE  | Unplanned    | 17%       | 32%          | 51%      | 0.08 N.S. |
|  | Planned      | 39%       | 16%          | 45%      |           |

Analysis for predictors of follow-up status was performed on the 72 patients on whom information was available (table 8). The three patients in prison were excluded as their drug use status was difficult to interpret. Completion of detoxification ( $p < 0.01$ ) and a history of not injecting ( $p < 0.05$ ) were associated with being drug free at follow-up. No patient who left hospital prior to day 15 was reported as being drug free. There was a trend of association between having a planned discharge and being drug free ( $p = 0.08$ ). Within the range of two to thirteen weeks, increasing timegap to the date of follow-up was not associated with poorer outcome.

## Discussion

There are three main limitations to this audit of the first twelve months of work in Cuan Dara. Firstly, the number of patients is quite small and hence the possibility of identifying statistically significant associations is reduced. In the case of follow-up status, this difficulty is compounded by failure to obtain information in nearly one third of cases. Secondly, as the fact of completion of detoxification was not recorded when data were initially gathered, admission beyond day fourteen was used to approximate to detox completion. As many detoxifications are complete by day ten or eleven, we are likely to have underestimated the proportion of completed detox's. Thirdly, the reliability of the follow-up information must be questioned. This is particularly the case for those patients reported to be drug free as it was not necessarily confirmed by urine testing.

Most of the demographics and drug use characteristics of the patient group are quite typical of drug users who attend for treatment in Dublin. However, females are overrepresented, the ratio of males to females here being one to two where it is generally around one to four<sup>(5)</sup>. The average history of opiate use is half that of the inpatient group in the NTORS study.

The rate of successful detox completion (71%) is similar to that reported for inpatient units elsewhere <sup>(1, 2)</sup>. The trend of improvement in the likelihood of detox completion as the year progressed is encouraging. The peak in patients taking their own discharge around the time of detox completion (days eleven to fourteen) is worrying, particularly when one considers that none of these patients were drug free at follow-up. It possibly

reflects an increase in withdrawal symptoms at this time or could indicate difficulty in coping with the psychological dependence on opiates as methadone is stopped.

Just over 40% of patients successfully completed the program which is very similar to the figure in the preliminary report on NTORS. There was a significant improvement in the proportion of patients doing so over the year, rates rising from 19% in the initial period to 57% in the last four months.

The ultimate measure of the success of treatment of opiate dependent patients is the proportion who become abstinent, in this study, we found that 26% of all patients were reported as being drug free after an average follow-up of ten weeks. This rose to 34% for those who completed the detox and to 39% for those who completed the full program. The figure of 45% reporting no heroin use at two months follow-up in the NTORS appears superior but may be misleading as nearly 20% of those included in the study reported no heroin use in the three months prior to admission. Also, it is not clear whether or not those patients reporting no heroin use could be on methadone. Gossop's report of 51% of patients being drug free six months after completion of an inpatient detox program is very impressive <sup>(4)</sup>, but is less so when his outcomes are examined more closely. In fact, of the 80 patients included in his study, only 31% were 'predominantly drugfree' for the two months following admission, and this is similar to our rate of 34% for detox completors. In his study, it seems surprising that the proportion who were drug free rose as the follow-up time increased. In our case, the trend for those few individuals who were followed-up more than once, after periods of four to eleven months, was for the proportion of drug free patients to decrease (not included in the results section as numbers were small).

### **Conclusions and Recommendations**

Despite this period being only Cuan Dara's first twelve months of operation, the success rates from the point of view of detox completion and program completion approximate to those reported in similar centres around the world. As the year progressed, patients were more likely to reach these goals, the biggest improvement being in the proportion of program completers.

The large number of self discharges in the days around detox completion warrants closer scrutiny. It suggests that patients need extra support around this time. If strategies could be designed to reduce such discharges, overall patient outcome would improve.

Due to the limitations of the study mentioned above, interpretation of the follow-up data is difficult. However it appears clear that the majority of patients do not remain drug free, even if they complete the full six week program, and this is the case after a follow-up of just ten weeks. The lack of an internationally standardised approach to audit and assessment of the performance of inpatient detoxification units with regard to patients' attainment of a drug free state makes comparisons with Cuan Dara difficult. Nevertheless, there are some reports in the literature of higher proportions of patients, being drug free.

A more detailed study of the first 18 months of Cuan Dara is ongoing. A more reliable method of obtaining information on the follow-up status of discharged patients would vastly improve the quality of this study and should identify in more detail ways in which the treatment program could improve.

## References

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# Unplanned Discharges

