CHARACTERISTICS OF ADMISSIONS TO RESIDENTIAL DRUG TREATMENT AGENCIES IN NEW SOUTH WALES, 1988-1992: ALCOHOL PROBLEMS

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EXECUTIVE SUMMARY

The Clients at Residential Agencies (CARA) database of the New South Wales Drug and Alcohol Directorate was analysed for trends in admissions of clients with alcohol problems over the years 1988-1992. CARA forms are completed by all 23 non-government residential treatment agencies funded by the Directorate for each admission and discharge.

There were no trends in the age or sex of admissions. Over all years, admissions for alcohol problems to residential agencies were overwhelmingly males in their mid-thirties. There was no change in the number of admissions by people of aboriginal descent although this group was over-represented, relative to the proportion of people of aboriginal descent in the general population, in all years.

There was a marked decrease, from 25% in 1988 to 16% in 1992, in the proportion of admissions who reported full time employment in the preceding six months. Over the same period the proportion of admissions that had been recently imprisoned and/or had previous criminal convictions increased. By 1992, over half of admissions had criminal convictions. Increasingly agencies are seeing admissions for alcohol problems who are unemployed and have criminal histories.

The proportion of clients who were admitted with no previous treatment history fell markedly over the study period. By 1992, over 80% of admissions had been treated previously. The proportion of admissions that had previously been treated at a residential agency fell over that period. It would appear that the non-government residential agencies who contribute to CARA are increasingly dealing with people with alcohol problems who have tried other treatments, prior to seeking residential admission. The duration of the alcohol problems prior to admission further illustrates the chronic nature of alcohol problems among this client population. In each year, more than 70% of admissions had problems of more than five years standing.

In all years, there was a high rate of attrition in the early stages of treatment. Approximately a fifth of admissions left treatment within the first week. While there were minor variations, length of stay did not significantly alter during the study period.

The current study indicates the value of collecting data on age, gender, type and duration of drug problem and prior treatment in documenting changes in client populations. It recommended that data similar to CARA be collected. In particular, it is recommended that i) the form be simplified and standardised and ii) a single form, completed at discharge, be used.

In conclusion, non-government residential agencies in NSW are now seeing a group of clients with increasingly chronic problems. Program planners need to take these findings into account in reviewing their programs.

1.0 INTRODUCTION

There are estimated to be between 29,000 and 44,000 people undergoing some form of treatment for drug or alcohol dependence in Australia[1]. Little is known, however, of the characteristics of clients at residential agencies, the overwhelming majority of research having been conducted in the United States[2,3].

Two recent Australian studies of individual residential agencies showed trends over time towards older clients, more polydrug use, longer duration of drug use and increasing previous exposure to methadone maintenance[4,5]. While these studies have shown similar trends in two agencies, they may not reflect statewide trends in characteristics of admissions to residential agencies. Admissions to both of these agencies, moreover, were predominantly for illicit drug problems, rather than alcohol. The trends for alcohol admissions may well be different from those of admissions for illicit drug problems.

The only major study conducted in Australia that examined statewide trends in admissions to residential agencies was Didcott et al[6], which covered admissions in 1985 and 1986. This study did not, however, provide separate analyses for admissions for alcohol problems.

The aim of the current study was to provide a profile of admissions for alcohol problems to the 23 non-government residential treatment agencies in New South Wales 1988 to 1992 using the Clients at Residential Agencies (CARA) database compiled by the New South Wales Drug and Alcohol Directorate. CARA forms are completed by all agencies for each admission and discharge. By analysing these data across a five year period it was aimed to increase our knowledge of residential agency admission characteristics, and to determine if there had been changes in these characteristics. Similar analyses for admissions with illicit drug problems have been reported elsewhere[7].

2.0 METHOD

CARA data for admissions and discharges are collected on separate forms, form A and form B respectively, which are unmatched. The forms changed mid way through 1991. The study population consisted of admissions between 1988-1992 who nominated a problem with alcohol drug as their primary problem. This posed problems for the analysis of data contained on the discharge forms because primary problem was not indicated on this form. Data on discharge forms was matched to data on admission forms so that the sample could be divided according to primary problems. Matching was conducted on year by year basis according to admission date, birth date and codename. Where discharge data and admission data could not be matched the cases were discarded. This difference in the analysis of admission data and discharge data means that interpretation of trends across years where data from 1988 to midway through 1991 comes from form B and where 1991 and 1992 data comes from form A should be treated with caution.

For a number of variables (reason for admission, reason for discharge previous treatment, source of referral, referral after treatment, drugs used in the last month, employment status, social security status, prison status, drugs used ever and previous treatment) more than one alternative could be nominated. In almost all cases the number of possible alternatives was limited to two. There was one exception: previous treatment where the number of possible alternatives was limited to three. In order to analyse this variable, all data was recoded into dichotomous variables where each alternative was treated as a separate variable.

Trends across years for dichotomous variables were analysed using the Mantel-Haenszel (M-H) Chi-square. These included the variables: sex, aboriginality, country of birth, main language, admission reason, discharge reason, previous treatment, employment in last year, social security in last year, prison in last year and convictions. Linear and quadratic trends across years for continuous variables (length of stay, age, age first used problem drug) were analysed by ANOVA. Where distributions were highly skewed, medians were reported. To control for multiple comparisons, Bonferroni adjustments were employed. All analyses were conducted using SAS[8].

3.0 RESULTS

3.1 *Demographics characteristics*

Table 1 shows the number of admissions for alcohol problems from 1988-1992. It should be noted that the lower recorded admission rate in 1988 does not reflect the actual admission rate. The data collection changed half-way through 1988, and only this data is being analysed so as to be consistent.

Table 1
Number of admissions

	1988*	1989	1990	1991	1992	Total
No. of admissions	537	1244	1233	1212	1216	5442

* Six months only

3.1.1 Gender

There were no significant differences in the sex distribution of admissions across the study period (Table 2). It should be noted that there are specialist women agencies among the 23 non-government residential treatment agencies in New South Wales.

Table 2
Sex of admissions

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
Male	86.8	86.4	86.0	88.5	87.7
Female	13.2	13.6	14.0	11.5	12.3
Total (N)	537	1244	1233	1211	1208

3.1.2 Age

Table 3 shows the mean age of admissions from 1988-1992. There were no significant differences in the age of admissions across the study period.

Table 3
Mean age in years

	1988	1989	1990	1991	1992
Mean age (SD)	34.4 (12.0)	34.5 (12.0)	35.0 (11.6)	34.5 (10.8)	32.9 (10.5)
Total (N)	537	1244	1232	1205	1214

3.1.3 Aboriginality

There were no significant differences in the number of admissions by Aboriginals across years (Table 4), although it should be noted that these proportions, ranging from 9.3% to 14.4% are in excess of the proportion of persons of aboriginal descent (1.5%) in the population[9]. Only two agencies specifically target persons of aboriginal descent.

Table 4
Aboriginality

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
Aboriginal	14.4	11.0	14.0	9.3	12.7
Non-Aboriginal	85.6	89.0	86.0	90.7	87.3
Total (N)	423	1006	1030	1063	1168

3.1.4 Country of birth

The number of admissions of non-Australian born people decreased slightly between 1988 to 1992 (M-H χ=13.20, df=1, p<.001) (Table 5). However, these proportions broadly reflect the general population[9].

Table 5
Country of birth

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
Australia	78.4	77.1	82.7	82.6	82.6
Overseas	21.6	22.9	17.3	17.4	17.4
Total (N)	537	1244	1233	1212	1216

3.1.5 Language

Table 6 shows that the proportion of admissions by people who were from a non-English speaking background increased from 1.6% to 4.7% between 1988 and 1992 (M-H χ=35.702, df=1, p<.001). The overwhelming majority of admissions, however, in all years were from English speaking backgrounds.

Table 6
Main language

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
English	98.4	98.8	99.3	97.2	95.3
Other	1.6	1.2	0.7	2.8	4.7
Total (N)	503	1108	1164	1196	1216

3.1.6 State of residence

Approximately 70% of admissions for alcohol problems in all years were from people who lived in NSW (Table 7). There were no changes in the proportion of New South Wales residents admitted to treatment over time.

Table 7
State of residence

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
New South Wales	72.6	69.8	73.8	72.4	73.4
Other	27.4	30.2	26.2	27.6	26.6
Total (N)	537	1244	1233	1212	1216

3.1.7 Employment, social security and prison status

Table 8 shows the percentage of people in the sample who were employed received social security or had spent any time in prison in the last 6 months. Some admissions will have entries in more than one category. There was a significant in decrease in the number of admissions who had been employed in the last 6 months from 1988-1992 (M-H χ=23.15, df=1, p<.001). Conversely, there was a significant in increase in the number of admissions who had received social security of some kind in the last 6 months (M-H χ=181.74, df=1, p<.001). It should be noted that the size of this effect is due to a big rise in admissions by people who received benefits in 1992.

There was also a significant increase from 1988-1992 in the number of admissions by people who had spent any time in prison in the last 6 months (M-H χ=13.84, df=1).

Table 8
Employment, social security and prison status

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
Employed	25.1	21.0	21.5	17.4	16.4
Social Security	64.1	56.5	62.1	66.7	85.5
Prison	1.3	1.6	2.4	2.2	3.9
Total (N)	503	1108	1164	1196	1216

3.1.8 Criminal history

Table 9 shows data for drug convictions (excluding alcohol or marijuana), criminal convictions and convictions prior to drug and alcohol problem. A higher proportion of admissions reported drug related convictions, rising from 8.9% of admissions in 1988 to 15.3% in 1992 (M-H χ=11.09, df=1, p<.001). There as also an increase in the proportion of admissions that had criminal convictions, from 45.7% to 59.3% (M-H χ=20.49, df=1, p<.001). There was no significant differences in the proportion of admissions reporting convictions prior to the onset of alcohol problems.

Table 9
Conviction records

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
Drug conviction	8.9	9.7	11.0	11.5	15.3
Criminal Conviction	45.7	52.6	54.2	58.5	59.3
Conviction prior to D&A problem	10.9	10.2	9.0	8.3	13.6
Total (N)	537	1244	1233	1212	1216

Note: Percentages do not add to 100% as more than one category could be nominated.

3.2 *Alcohol Use*

3.2.1 Age first used alcohol

Table 10 shows the age that admissions reported first starting to use alcohol. There were no changes in the age alcohol was first used over the study period, the mean age being consistently in the mid-teens.

Table 10
Age first used alcohol

	1988	1989	1990	1991	1992
Age	15.8 (4.9)	15.4 (4.6)	15.7 (4.7)	15.8 (4.3)	14.5 (5.9)
Total (N)	479	1104	1071	1132	1215

3.2.2 Duration of alcohol problems

Table 11 shows the duration of alcohol problems. In each year over half of admissions had alcohol problems of more than ten years duration, with more than 70% in each year having more than five years of alcohol problems. Agencies clearly are dealing with people who have long-standing problems.

Table 11
Duration of alcohol problem

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
Up to 6 months	0.2	0.6	0.6	0.6	1.3
6 mths-2 yrs	1.7	2.7	4.5	4.1	4.0
2-5 yrs	11.6	10.3	8.4	10.5	13.6
5-10 yrs	20.7	16.1	18.7	19.6	23.4
More than 10 years	60.5	65.0	64.9	63.4	55.9
Total (N)	537	1244	1233	1212	1216

3.3 *Treatment history*

Table 12 presents the treatment history of admissions. There number of admissions where no previous treatment was reported (M-H χ=183.40, df=1, p<.001) dropped from 44.4% of admissions in 1988 to only 18.7% in 1992. The number of admissions reporting previous detoxification increased from 38.0% in 1988 to 50.8% in 1992 (M-H χ=97.74, df=1, p<.001). Previous treatment at a residential agency dropped over the study period, from 77.3% in 1988 to 50.1% in 1992 (M-H χ=200.05, df=1, p<.001).

Table 12
Treatment history

	1988 (%)	1989 (%)	1990 (%)	1991 (%)	1992 (%)
None	44.4	41.4	42.6	31.4	18.7
Detoxification	38.0	30.6	25.7	41.3	50.8
Residential	77.3	74.5	74.9	63.9	50.1
Total (N)	537	1244	1233	1212	1216

Note: Percentages do not add to 100% as more than one category could be nominated.

3.4 *Length of stay*

The median length of stay for admissions to residential agencies are shown in Table 13. Admissions for detoxification were excluded because the length of these admissions is determined by their nature and not by trends over time (see Table 17). Due to the highly skewed distribution of length of stay, a log transformation was performed on the data. While there appeared to be a quadratic trend across the study period, with length of stay increasing and then declining, this was not significant (p<.23). Overall, however, length of stay remained relatively stable throughout between 1988 and 1992.

Table 13
Median length of stay in days

	1988	1989	1990	1991	1992
Median	29	34	32	18	26
Total (N)	537	1244	1233	1212	1216

The frequencies of various length of stays, also excluding detoxification admissions, are presented in Table 14. As can be seen in all years there a large proportion of admissions dropped out of treatment in the first week.

Table 14
Frequency of length of stay

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
< 1 week	21.0	20.1	20.7	31.3	21.7
< 3 weeks	19.8	19.3	19.1	23.0	21.2
< 8 weeks	24.7	22.0	24.7	25.1	30.8
< 12 weeks	8.6	10.2	11.6	12.1	9.2
> 12 weeks	25.9	28.4	23.9	8.5	17.1

3.5 *Referrals and discharges*

Table 15 shows that there was an increase in the number of admissions for detoxification (M-H χ=27.19, df=1, p<.001), assessment (M-H χ=27.19, df=1, p<.001), admissions with current court orders (M-H χ=15.11, df=1, p<.001) and impending court cases (M-H χ=24.73, df=1, p<.001). Overall, admission are overwhelmingly voluntary, rather than court directed.

Table 15
Admission reason

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
Detox-ificati on	3.1	5.5	7.8	7.3	10.0
Assessment	0.4	0.7	1.3	2.1	2.7
Waiting for admission elsewhere	1.1	0.9	1.7	0.5	0.3
Treatment/ Rehabilitati on	83.9	83.4	76.3	71.1	89.2
Current Court Order	3.1	1.7	1.8	1.6	5.3
Impending Court Case	3.6	2.5	2.4	2.1	7.3
Specific Court Order	0.2	1.8	1.7	0.3	2.0
Release from Prison	0.2	0	0.4	0.4	0.7
Total (N)	477	1201	1254	1214	1209

Table 16 presents reasons for discharge. There were decreases in people who were discharged for disciplinary reasons (M-H χ=22.11, df=1, p<.001), people who left against advice or with no reason (M-H χ=173.11, df=1, p<.001), and people who completed rehabilitation (M-H χ=51.91, df=1, p<.001). It should be noted that there were large amounts of missing data for this variable.

Table 16
Discharge reason

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
Program not suitable	2.7	6.9	4.9	4.5	4.3
Disciplinary	14.5	10.9	9.7	8.5	7.4
Left against advice/no Reason	39.8	39.0	39.7	27.9	16.7
Not committed to rehab.	13.8	13.7	11.6	9.9	10.3
Completed Detox.	2.5	5.3	15.5	12.3	6.2
Completed Rehab.	8.2	10.3	9.7	5.3	2.9
Total (N)	537	1244	1233	1212	1216

Table 17 presents sources of referral to residential agencies. There was a slight increase in referrals by self/relative/friend (M-H χ=14.77, df=1, p<.001).

Table 17
Source of referral

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
Self/ Relative/ Friend	49.35	45.42	42.42	51.49	53.21
D&A Unit	21.79	22.75	22.22	23.02	23.60
Hospital/ other Unit	6.70	7.88	5.92	7.84	6.25
Community Health Centre	3.35	4.18	3.89	6.44	2.63
Total (N)	537	1244	1233	1212	1216

Referrals after discharge from residential agencies are presented in Table 18. There were decreases in the number of people referred to alcoholics anonymous (M-H χ=27.74, df=1, p<.001) and the number of people referred to their own care (M-H χ=315.47, df=1, p<.001). There were no significant trends in the number of admissions referred to detoxification units after discharge, refuges/hostels or refused referral. Again, it should be noted that there were large amounts of missing data for this variable.

Table 18
Referral after discharge

	1988(%)	1989(%)	1990(%)	1991(%)	1992(%)
Detox. unit	0.6	0.8	0.6	0.6	1.2
AA/NA	17.8	18.1	25.0	15.7	11.1
Another Residential Rehab. Unit	2.1	3.0	3.7	1.8	1.0
Outpatient Counselling	3.6	4.3	4.6	3.9	1.6
Refuge/ Hostel	4.4	2.7	1.7	1.4	1.1
Refused Referral	4.0	3.3	4.6	4.9	4.6
Own Care	61.4	59.5	47.7	34.1	29.6
Total (N)	477	1201	1254	1214	1209

4.0 DISCUSSION

Unlike the trends reported for illicit drug problem admissions over the same period[7], there were no trends in the age or sex of admissions. Over all years, admissions for alcohol problems to residential agencies were overwhelmingly males in their mid-thirties. This contrast with admissions to residential agencies with illicit drug problems, who are typically in their late twenties[7].

There was no change in the number of admissions by people of aboriginal descent although this groups was over-represented, relative to the proportion of people of aboriginal descent, in all years. People who were admitted for alcohol problems were predominantly Australian born and spoke English as their main language. The number of Australian born people admitted from 1988-1992

increased relative to the number of people who were born overseas. However this trend does not necessarily reflect a decrease in the ethnic diversity of the populations because the number of people whose main language was not English also increased.

There was a marked decrease, from 25% in 1988 to 16% in 1992, in the proportion of admissions who reported full time employment in the preceding six months. Over the same period the proportion of admissions that had been recently imprisoned and/or had previous criminal convictions. By 1992, over half of admissions had criminal convictions. Increasingly agencies are seeing admissions for alcohol problems who are unemployed and have criminal histories.

The proportion of clients who were admitted with no previous treatment history fell markedly over the study period. By 1992, over 80% of admissions had been treated previously. Interestingly, the proportion of admissions that had previously been treated at a residential agency fell over that period. It would appear that residential agencies are increasingly dealing with people with alcohol problems who have tried other treatment, prior to seeking residential admission. These trends are similar to those reported for illicit drug admissions[7]. The duration of the alcohol problems of admissions further illustrates the chronic nature of alcohol problems by the time of admission to a residential agency. In each year, more than 70% of admissions had problems of more than five years standing. For both illicit drug[7] and alcohol problems, residential agency admissions are typically people with long-term drug and alcohol problems.

In all years, there was a high rate of attrition in the early stages of treatment. Approximately a fifth of admissions left treatment within the first week. This pattern is similar to that previously reported overseas[3,4,10] and in Australia[6]. A similar pattern was reported for admission for illicit drug use problems over the period 1988 to 1992[8]. The median length of stay rose slightly to a peak of 34 days in 1989, but declined to 26 days by 1992. These changes were, however, not statistically significant.

Several caveats have to be made concerning the CARA data. Firstly, the form has changed many times since its inception in 1985. Questions on key variables changed, making comparisons over years difficult. In some cases questions were sometimes asked at admission, and sometimes at discharge, again making trends in admissions difficult to measure. There are also large amounts of missing data for many of the variables, which raises questions as to the quality of completion of the forms as they currently exist. Busy staff may simply not have the time to fully complete the current CARA forms. Nevertheless, despite these limitations, clear trends in admission over the study period still emerge, indicating the worth of collecting such data.

The current study indicates the value of collecting even simple data on variables

such as age, gender, type and duration of drug problem and prior treatment in documenting changes in client populations. It recommended that data similar to CARA be collected. In particular, it is recommended that i) the form be simplified and standardised and ii) a single form, completed at discharge, be used.

In summary, admissions for alcohol problems to residential agencies in New South Wales remained stable in terms of age, gender and duration of alcohol problems. There have been changes, however, in other demographic variables, however, with clients increasingly being unemployed, having criminal convictions and a previous treatment history. Program planners need to take these findings into account in reviewing the appropriateness of their programs.

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APPENDIX 1

LIST OF CONTRIBUTING AGENCIES

APPENDIX 2

CARA DATA FORMS